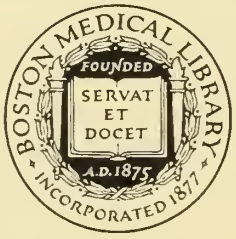
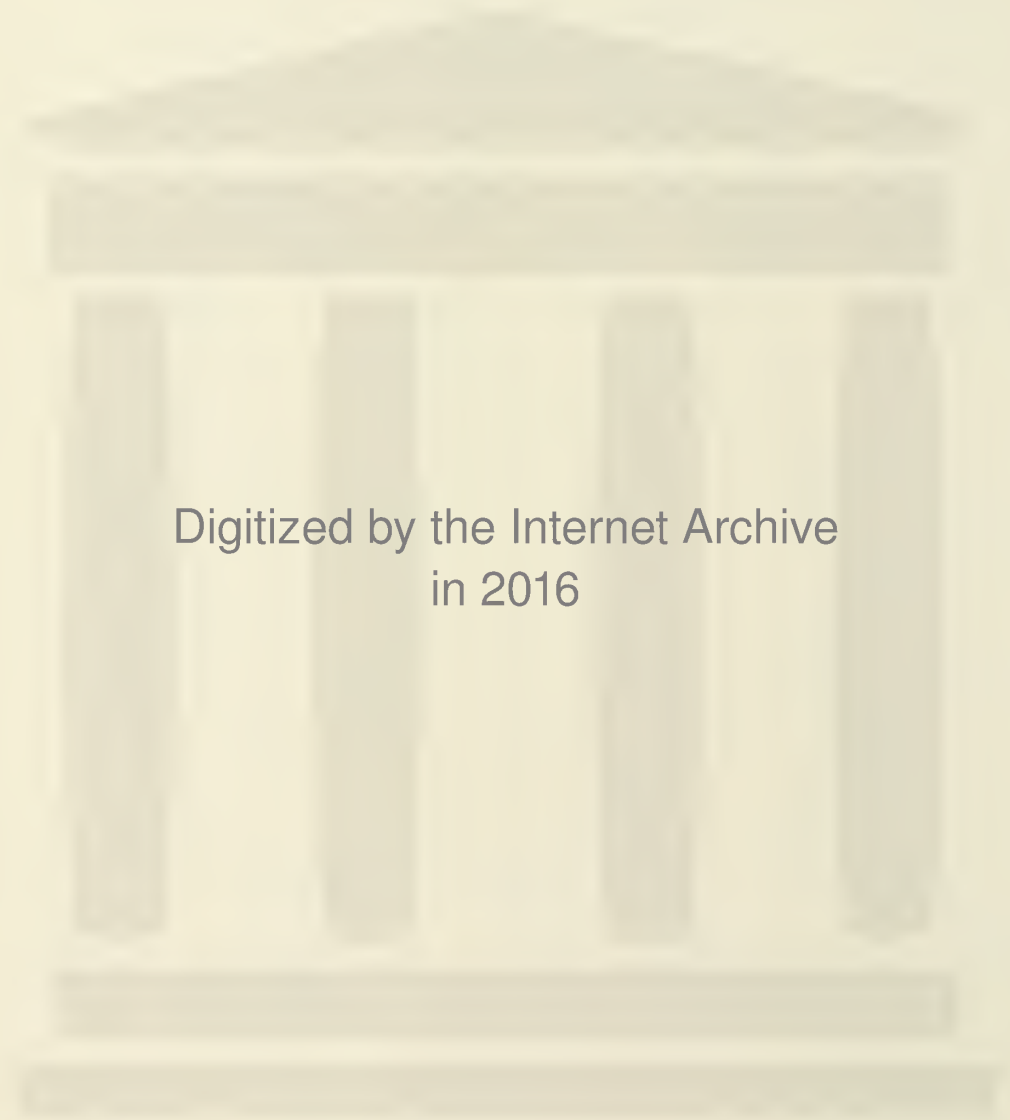
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VOLUME 60 JANUARY, 1969 NUMBER 1

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Research in Maine Issue

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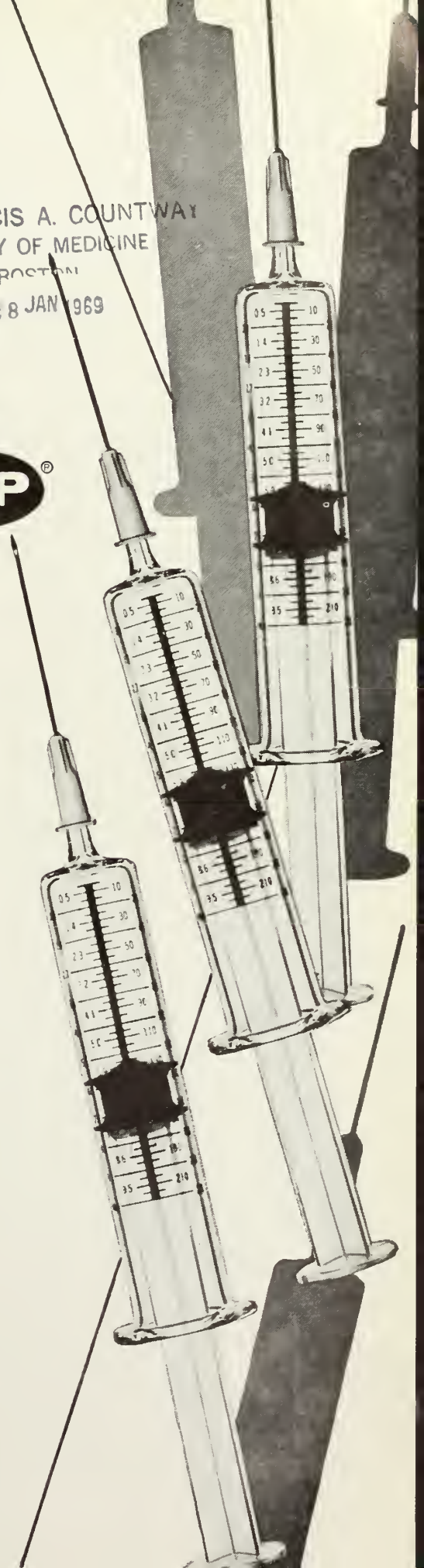
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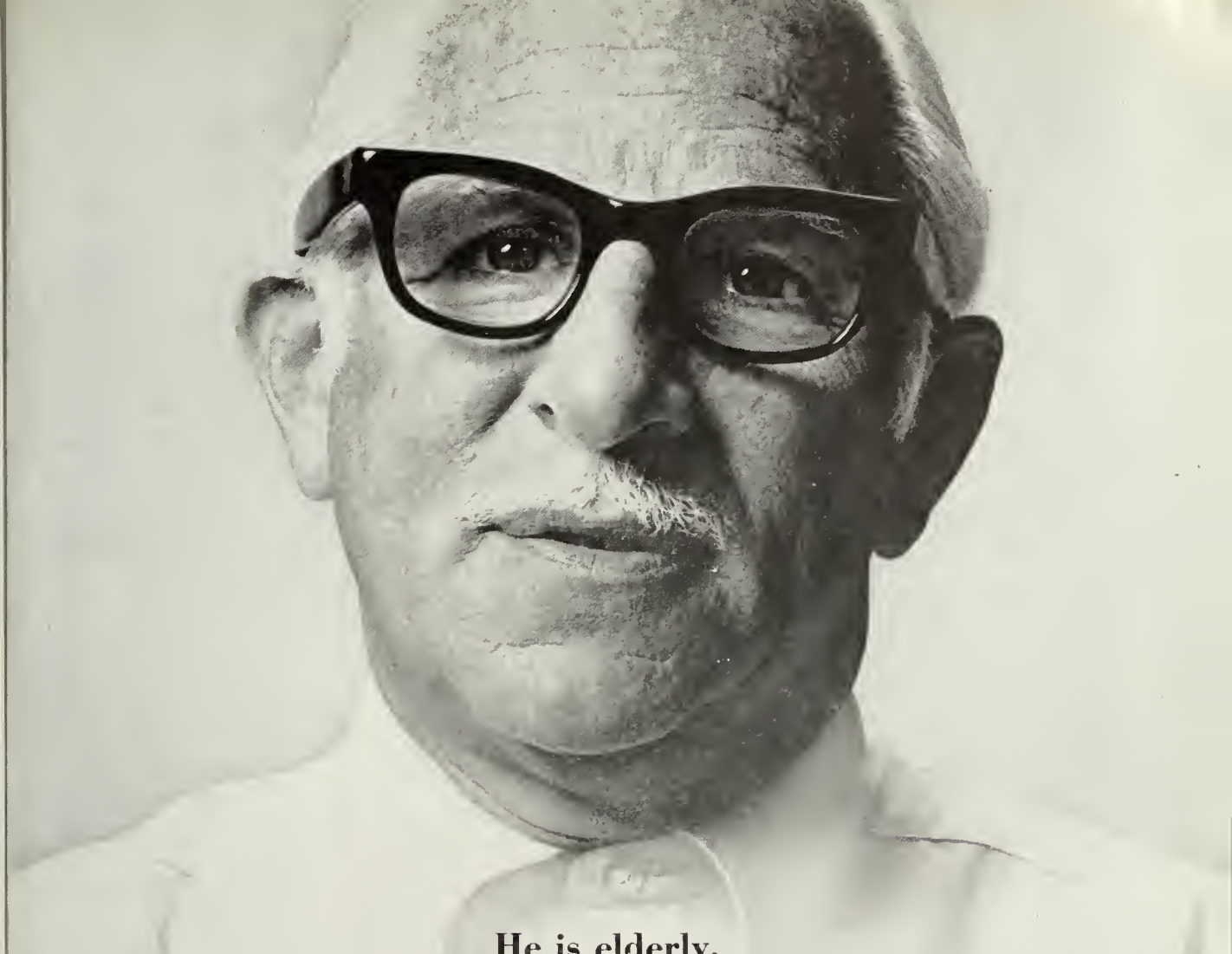
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(Artist's conception of reflex arc.)



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oduct information, a summary of which follows:

ıdications: Tension and anxiety states; somatic
mplaints which are concomitants of emotional
ctors; psychoneurotic states manifested by
nsion, anxiety, apprehension, fatigue, depressive
mptoms or agitation; acute agitation, tremor,
lirium tremens and hallucinosis due to acute
cohol withdrawal; adjunctively in skeletal
uscle spasm due to reflex spasm to local
thology, spasticity caused by upper motor
uron disorders, athetosis, stiff-man syndrome,
nvulsive disorders (not for sole therapy).

ontraindicated: Known hypersensitivity to the
ug. Children under 6 months of age. Acute
rrow angle glaucoma.

arnings: Not of value in psychotic patients.
aution against hazardous occupations requiring
mplete mental alertness. When used adjunctively
convulsive disorders, possibility of increase in
equency and/or severity of grand mal seizures
ay require increased dosage of standard anti-
nvulsant medication; abrupt withdrawal may
associated with temporary increase in frequency
d/or severity of seizures. Advise against
nultaneous ingestion of alcohol and other CNS
pressants. Withdrawal symptoms have
curred following abrupt discontinuance. Keep
diction-prone individuals under careful
rveillance because of their predisposition to
bituation and dependence. In pregnancy,
ctation or women of childbearing age, weigh
tential benefit against possible hazard.

ecautions: If combined with other psycho-
tropics or anticonvulsants, consider carefully pharmacology of agents employed. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation, have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

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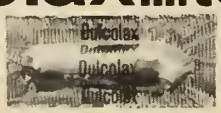
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Precautions: In suspected staphylococcal infections, perform proper laboratory studies including sensitivity tests. If overgrowth of nonsusceptible organisms occurs (constant observation is essential), discontinue penicillin and take appropriate measures. Whenever allergic reactions occur, withdraw penicillin unless condition being treated is considered life threatening and amenable only to penicillin. Penicillin may delay or prevent appearance of primary syphilitic lesions. Gonorrhea patients suspected of concurrent syphilis should be tested serologically for at least 3 months. When lesions of primary syphilis are suspected, dark-field examination should precede use of penicillin. Treat beta-hemolytic streptococcal infections with full therapeutic dosage for at least 10 days to prevent rheumatic fever or glomerulonephritis. In staphylococcal infections, perform surgery as indicated.
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Contraindication: Penicillin hypersensitivity.

Warnings: In rare instances, penicillin may cause acute anaphylaxis which may prove fatal unless promptly controlled. This type of reaction appears more frequently in patients with a history of sensitivity reactions to penicillin or with bronchial asthma or other allergies. Resuscitative drugs should be readily available. These include epinephrine and pressor drugs (as well as oxygen for inhalation) for immediate allergic manifestations and antihistamines and corticosteroids for delayed effects.

Precautions: Use cautiously, if at all, in a patient with a strongly positive history of allergy.

In prolonged therapy with penicillin, and particularly with high parenteral dosage schedules, frequent evaluation of the renal and hematopoietic systems is recommended.

In suspected staphylococcus infections, proper laboratory studies (including sensitivity tests) should be performed.

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Adverse Reactions: Although serious allergic reactions are much less common with oral penicillin than with intramuscular forms, manifestations of penicillin allergy may occur.

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VOLUME 60 JANUARY, 1969 NUMBER 1

A Further Consideration of Research in Maine

William H. Austin, M.D.

GUEST EDITOR

Again in 1969 we have prepared a Research Issue of the Journal of the Maine Medical Association. The purpose of such a presentation is threefold. First we are setting down information as an example of the type of work being done within the state. Secondly, results of experimentation and literature review are being offered for their intrinsic value and interest. The final purpose is to illustrate the kind of service research can offer to the community. This service is one of education and dissemination of information acquired during the course of research activities. In many cases this knowledge will not be the direct result of an individual's experimentation, but will be known to him because of his specialized interest.

For these reasons the papers which appear in the following pages take a variety of forms. Some of them deal directly with laboratory techniques and experimentation, the application of which may be direct or indirect. One paper is a report of negative results. Still another work involves a re-evaluation and explanation of a concept which has been misunderstood or taken for granted. Those papers which will probably generate the greatest interest are the ones which summarize results of many clinical experiments and interpret them in the light of their application to patient care.

We hope within the scope of this material there will be something of interest for all readers, and that we will have achieved the previously outlined goals. By demonstrating the interplay of basic and applied research, we hope to dispel the idea that medical investigation is a purely intellectual pursuit, and emphasize that the ultimate goal is better patient care. In this endeavor we need the support of all physicians to encourage local and federal support of research activities.

Some Basic Principles of Electrocardiology with Possible Practical Applications*

CLIFFORD V. NELSON, Ph.D.**

In the preface to "Symposium on Basic Research,"[1] Warren Weaver defines basic research as "the untrammeled search for new knowledge for its own sake," and applied research as "the search for and the use of knowledge specifically needed for recognized practical objectives." There are, of course, many concepts of basic and applied research, depending on one's training and background. In the medical field, some consider that studies involving patients or their by-products constitute clinical research, and all other work is basic. From Weaver's view point, my research has been entirely applied, although it might not be thought of as being clinically oriented.

In this article, I wish to show how some of my relatively basic research has led or may lead to clinical applications. This work has been entirely on the properties and significance of the electrical currents produced by the heart. The basic starting point is the distribution of electrical currents produced when two wires are immersed vertically at the center of a circular dish containing conducting fluid and the wires are connected to a battery (Fig. 1). The wire connected to the positive terminal of the battery is called the + pole, and the wire going to the negative terminal is the – pole; the combination of the two poles is called a dipole. The dipole moment, M, is defined as the product of the current, I, flowing from the + pole (source) to the – pole (sink) and the distance D between source and sink. That is

$$M = ID \qquad (1)$$

The objective of my research program has been to measure the dipole moment of the heart.

In Fig. 1, the potential difference between source and sink is 5.0 volts. If the voltages are measured relative to a point midway between source and sink, the potential of the source is +2.5V, and the potential of the sink is –2.5V. The circles near source or sink are the loci of points of constant voltage, or "equipotentials." It is evident that the voltage drops off rapidly with distance from the poles. The collection of constant voltage lines is called an "electrical field," or voltage field in this case. A diagram showing lines of current flow would be called a current field.

The current field is not shown in Fig. 1, but it may

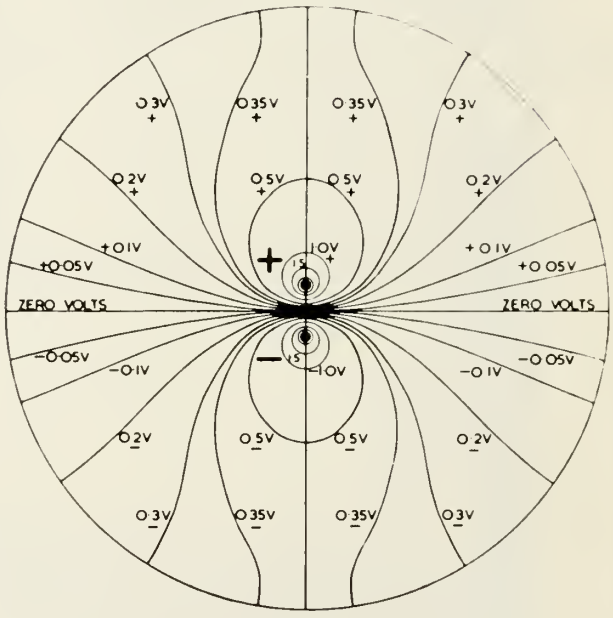


Fig. 1

be sketched in easily. If a current line is drawn from the + pole in any direction, it will appear to travel from one equipotential to the next by the shortest possible path, finally terminating on the – pole. That is, the current flow lines are everywhere perpendicular to the equipotentials. In electrocardiology, we are much more interested in the voltage field than in the current field, even though physically the effects that occur are due to current changes, and only indirectly to voltage changes

A still more basic starting point would have been the field of a dipole in an infinite, two-dimensional medium. In this case, all the equipotentials would have been perfect circles. Fig. 1, therefore, illustrates the first factor affecting the electrocardiogram, i.e. the finite boundary (body surface).[2]

When a boundary exists, as it usually does, the equipotentials are considerably distorted. They appear to be attracted to the boundary, and terminate on it. This is easily understood by realizing that the lines of current flow cannot penetrate the boundary, but must flow tangentially to it. Since the equipotentials must be perpendicular to the current flow lines, they must meet the boundary at right angles. The finite boundary, therefore, introduces an important complication in the determination of the dipole moment, even in the simple case of Fig. 1. It is obvious that the mathematics needed to describe this voltage field are much more difficult than if all the equipotentials were perfect circles. (Fortunate-

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ly, a mathematical shortcut exists, called the method of "electrical images.")[3]

Before leaving Fig. 1, it may be useful to illustrate some other basic points. If the dipole rotates through a certain angle, say 60°, the entire voltage field will rotate through the same angle. The voltages along the line through the dipole axis will be maximum at a given distance from the dipole. The voltage along the line perpendicular to the dipole axis at its midpoint is zero. These conditions also persist when the dipole rotates. If the dipole voltage were ±25 volts instead of ±2.5 volts, the value of each equipotential would be multiplied by 10, but the pattern would remain unchanged.

The next step towards electrocardiographic reality is to bring the dipole closer to the boundary of the circle, since the heart is located in the anterior part of the thorax. To make matters worse, the heart is not usually located on the center-line, but is somewhat towards the left. If in Fig. 1, the dipole is assumed to be moved anteriorly and to the left, several things happen. The pattern becomes distorted, and the field is no longer symmetrical around the dipole. The potentials on the anterior wall become greater than those at the posterior. The locus of maximum potential is no longer a straight line through the dipole axis; the line passes through the dipole axis, but becomes curved towards the boundary. The closer the dipole to the boundary, the greater the degree of curvature.[4] The zero potential line is no longer exactly perpendicular to the dipole axis.

Fig. 2 shows a dipole in a model of a cross-section through the thorax. The "lung" models were cut out from a glass plate. The boundary section was filled with a conducting salt solution, which also covered the lung sections. The depth of fluid over the lung sections was one-fourth the depth in the rest of the section. Since the effective conductivity is proportional to fluid depth, this simulated lungs having four times the average resistivity. The spine and sternal sections were made of plastic, and were thicker than the fluid depth, so these acted as nonconductors. (Actually, bone has a finite resistivity, but it is much higher than that of other body tissues).

Fig. 2 shows that there is some distortion of the electrical field due to the electrical inhomogeneities, but this is not as bad as one might suppose, at least at the external boundary. The dipole axis and the transverse axis are shown in dashed lines. The intercepts of the transverse axis with the boundary are not too far from the zero potential points. The points of maximum potential on the anterior boundary (labelled "M"), on the other hand, are not at the intercepts of the line through the dipole axis. A line joining the two M points is approximately parallel to the dipole axis, and this might be a way of estimating the direction of the dipole.

Although these simple models are useful in gaining an understanding of the effects of various factors on the potentials produced by a dipole, the case of the resultant dipole of the heart situated in the human or animal thorax is much more complicated. The body is three-dimen-

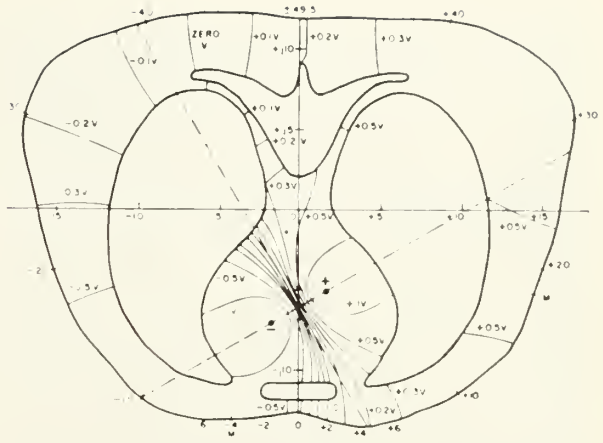


Fig. 2

sional, and currents flow in all directions. At any time, the wave fronts of excitation are widely distributed, and do not always act like a single, resultant dipole.* The heart dipole changes in direction, strength and location during the cardiac cycle. The situation is further complicated by differences in electrical conductivity of blood, myocardium, lungs, and fat, which tend to distort the current field. In addition, the human or animal body does not have a shape convenient for mathematical calculations. It is evident therefore, that the task of obtaining information about the heart's electrical generators is a formidable one.

One approach to this problem is through application of a theorem which states that the resultant dipole moment of any system of current sources and sinks in a conducting volume can be obtained from an integration of potential over the boundary of the volume.[5] In other words, the heart vector can be found by measuring the potential at many points on the body, multiplying the potential at each point by a factor depending on the shape of the body, and summing these products. Using this theory, we have developed a vector lead system consisting of 3 rows of 8 electrodes around the thorax, plus a foot-head lead.[6,7] One practical result of this research is the demonstration that the thoracic cross-sectional or surface areas must be included in the values of the X, Y and Z vector components. This has an obvious application in the interpretation of the VCG of children. It is well known that thoracic potentials are generally greater in children than adults.

When the body area is included in the calculations, however, the VCG is more in keeping with relative heart size. This is the first step in quantification of the VCG, and in studying correlations between vector magnitude and heart size or extent of heart excitation. For those

*The resultant, or effective dipole, is a fictitious dipole which, if substituted for the heart's electrical forces, would produce the same potential distribution over the body surface. It represents only an overall view of the general direction and magnitude of the excitation process, and is the vector sum of all the individual heart dipoles.

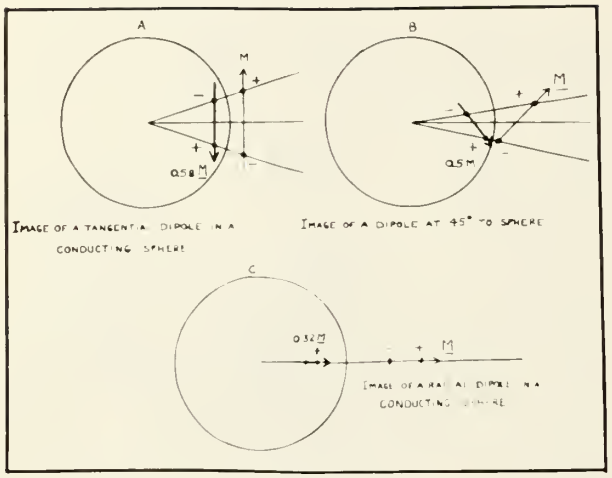


Fig. 3

using other lead systems, such as the Frank, I would suggest that X and Z voltages (left-right and back-front) be multiplied by thoracic surface area, and Y voltages (inferior-superior) be multiplied by thoracic cross-sectional areas. This will at least give vectorcardiograms which take body size into account. I believe, however, that the vector lead system based on the integration method,[7] gives a more accurate representation of the heart-vector, although additional electrodes are required to obtain this improvement in accuracy. This method also gives the magnitude of the heart-vector, subject to the assumption of an electrically homogeneous interior. Using quantitative methods, we have found a good correlation between dipole moment magnitude and heart size in various species.[8]

Several studies have indicated that the intracardiac blood volume may have an important influence on the distribution of electrical currents generated in the myocardium. A basic approach to this problem is to consider what happens when a dipole is adjacent to a circular disk of high conductivity. Using the method of electrical images, equations were developed for the calculation of the potentials.[9] The image of a source, I, outside a circle at distance b from the center, is a source located inside the circle at a distance $\frac{R^2}{b}$ from the center. The strength of the image source is

$$I' = \left[\frac{G-1}{G+1}\right] I \qquad (2)$$

$$\text{where} \qquad G = \frac{\rho_i}{\rho_o} \qquad (3)$$

Thus, G is the ratio of the resistivity of the region inside the circle to the resistivity of the external medium. If we let ρ_i be equal to the resistivity of blood, 150 ohm-cm, and ρ_o = resistivity of myocardium, ca. 450 ohm-cm, then $G = 1/3$ and $\frac{G-1}{G+1} = -\frac{1}{2}$.

The image of the external source is then actually a *sink* of strength $-\frac{1}{2}$ I. Similarly, the image of an external sink, –I, becomes a source of strength $+\frac{1}{2}$ I. The entire external field can then be calculated as the sum of the potentials due to the real and the image dipole. The image dipole does not physically exist, but is only a mathematical device to simplify the calculation.

Using the images of a dipole in a conducting sphere, Brody[10] pointed out that if the dipole is tangential or parallel to the sphere, the image dipole is oppositely directed to the real dipole, and acts to counteract the real dipole to some extent, as shown in Fig. 3A. The potentials are, therefore, reduced almost everywhere. Physically, the current flowing between + and – poles is partially short-circuited by the highly conducting blood mass, so that the equipotentials tend to be concentrated closer to the dipole.

If the real external dipole is radial to the sphere (or heart-cavity) as shown in Fig. 3C, the image dipole reinforces the real dipole, and potentials are nearly universally increased. In this case, the current flow lines spread more easily through the good conductor, and the equipotentials become more spread out. Fig. 3B shows that for a dipole making an angle with the cavity, the potentials would be increased in some areas and reduced in others. These theoretical concepts have been confirmed experimentally using dog-bladders filled with highly conducting fluid adjacent to a dipole in an elliptical-cylinder thorax model.[11] In relation to the heart, these results indicate that the effects of the intracardiac blood on the electrocardiogram depend on the direction of spread of the impulses in the myocardium relative to the cavity.

Recently, we have made more direct, physiological tests of this effect by altering the hematocrit of the blood in dogs.[12,13] In one type of experiment, we partially exchanged whole blood with packed cells in successive transfusions, bringing the hematocrit up to 60-70. Since the electrical resistivity of blood is due mainly to the cell membranes, the resistivity increases with higher hematocrit. At a hct of 70, the resistivity approaches 350 ohm-cm. When the cavity is filled with blood of this resistivity, we have a more electrically homogeneous situation. Comparing VCG's under these conditions, with those obtained with normal blood in the cavities, shows the effects of the normal blood. We found that the normal intracardiac blood seems to enhance the voltages occurring early in QRS, but to attenuate those occurring later. This effect is considerable, in some cases being as high as a 100% change. On the other hand, in similar experiments where plasma or rheomacrodex was used to partially replace whole blood, the initial peaks were further increased. This means that the intracardiac blood has the effect of creating a false impression of the magnitude of the heart-vector, based on observed body potentials, in the normal electrocardiogram. Also, the high voltages sometimes associated with anemia may be due in part to the lowered resistivity of the intracardiac blood.

To summarize, I have attempted to show how basic mathematical concepts and simple experiments can lead to developments of some importance in electrocardiol-

ogy. To derive an accurate relationship between the measured vectorcardiogram and the heart excitation, or heart-vector, it is necessary to include body dimensions and to correct for the effects of the intracardiac blood. We have postulated that, in the transfusion experiments, the increase in early QRS voltages caused by normal intracardiac blood is associated with a radial myocardial excitation, from endocardium to epicardium. The later reduction in voltages may be due to tangential spread of the excitation. In future experiments, we plan to correlate the changes in voltages with the excitation process.

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Virus Control at Last?

A reputed advance in the artificial stimulation of a natural virus-fighting substance — called Interferon — within the human body represents a significant step in the development of a drug to combat viruses, news sources reported recently.

A chemical called Polycytidilic Acid, which is a synthetic form of DNA, acts by inducing the body to produce large amounts of Interferon. In rabbits, the treatment has cured serious virus infections of the eye, according to an announcement by the National Institute of Allergy and Infectious Diseases. The research provides "solid evidence" that acute virus infections can be cured by stimulating the body's production of Interferon. The principal advantage of Interferon stimulation is its safety for humans because it is produced naturally by the body.

A report on the research in the current issue of "Science" magazine quotes Dr. Samuel Baron of the Institute's Laboratory of Viral Diseases as saying "the implications are clear. Stimulation of Interferon will probably soon be useful to prevent a broad range of virus infections of man and animals. It will eventually be possible in all likelihood to treat fully established virus infections."

The "New York Times" quoted Baron as saying in an interview that he expected the method to be tried soon against some serious virus diseases of man for which no vaccine is possible. Among these possibilities, he suggested, are some types of virus-caused encephalitis. — **The Blue Cross Digest.**

Serum Protein Electrophoresis as a Clinical Tool

Robert F. Ritchie, M.D.*

Even before the full impact of serum protein electrophoresis has been felt in clinical medicine, new methods threaten to replace it. Techniques by which individual classes of soluble proteins are separated in an electric field have progressed so rapidly that few laboratories have been able to develop a stable system with which they feel at ease. Continual introduction of new support media, buffers, dyes and chambers have reduced a reasonably standard and reproducible system eight years ago (Durham cell paper electrophoresis) to chaos. Each instrumentation company claims to have the best system available. The more systems have changed the more they have remained the same. Still the most effective medium, agarose, is largely unknown to most clinicians and laboratories. Although electrophoresis will be replaced in the next decade by better techniques, it remains a valuable stop-gap approach to assist clinicians in evaluation of serum protein abnormalities.

The purpose of electrophoresis is to separate serum proteins into distinct bands for quantitation by densitometric scanning. Ninety-three plasma proteins have been described yet the most sophisticated research electrophoretic techniques detect only 35. Hence, we must consider the various protein fractions as representing molecular composites containing many species that cannot be separated in the foreseeable future. These fractions have been given names based upon the original free boundary system. The terms for the albumin (most positive or anodal) and alpha, beta and gamma (most negative or cathodal) zones have been retained in newer systems. Clinical electrophoretic methods may never reach a degree of resolution sufficient to separate even the major fractions into their constituent parts for quantification. Evidence gathered over the last five years indicates that efforts in clinical electrophoresis should be directed toward improving repeatability, reproducibility and ease of operation of our present methods and neglecting for the moment improvements in resolving power.

A variety of support media have been introduced since electrophoresis was made available twelve years ago. Filter paper strips were the first method to attain wide usage. Many laboratories still use this technique. To improve resolution and speed up processing many laboratories sacrificed the technical stability of filter paper for the more rapid but unpredictable cellulose acetate films. While results are more rapidly obtained and 7 bands rather than 5 can be identified, these improvements have not given the physician any additional clinically useful information. Moreover, the plethora of materials and methods in use today has destroyed relatively standard results that were previously obtained from laboratory to laboratory with the old paper system.

It is the purpose of this report to place the various methods of protein electrophoretic quantitation into perspective and to answer some questions concerning the application and interpretation of standard agarose electrophoresis.

Available Methods

Free boundary electrophoresis: In some research departments the original method of separating proteins in aqueous solution is still performed today by a modern virtually automatic device. Its high cost and lengthy operation limits its use to very specialized research problems.

Electrophoresis in stabilizing media: This broad category embrases most of methods in use today. In this system, dissolved proteins are made to move through the unimpeding, fluid-filled interstices of a support media. The original media was *filter paper.* Its chief drawback is the length of time required for completion of a run, (usually 14 hours) limiting a laboratory to one run or 8 samples per day. The protein boundaries were less distinct than subsequent methods, but for practical purposes yielded almost the same information. *Agar gel,* popular in Europe has been used sporadically in this country. Its major attraction is the increased speed of separation, but, like its predecessor, it yields little new clinically valuable data. A major effort on the part of several companies has made protein electrophoresis on *cellulose acetate* strips available to every laboratory or physician who can afford a few hundred dollars to purchase the compact equipment. While it is inexpensive, rapid and simple, it adds little more information, than filter paper strips. Moreover, technical personnel recognize that cellulose acetate strips, while simple to use, are difficult to use well. Despite meticulous attention to detail, results are often unsatisfactory. The reason is that this medium lacks the chemical and physical standardization so necessary for reproducible results and so well established for filter paper strips. The newest method employs a gel film made of *agarose,* a constituent of agar (Fig. 1). Like other gel methods this system requires completely new equipment and meticulous technique. With care, highly reproducible results are obtained. Agarose is rapid and cheap. Forty samples can be processed per day. Unlike earlier techniques it requires thermoregulation.

Molecular-sieve electrophoresis in gels: Theoretically, dissolved proteins migrate through a medium offering little resistance to migration. Two common gels, starch and acrylamide (Fig. 2) retard protein movement according to molecular size and configuration. Resolution

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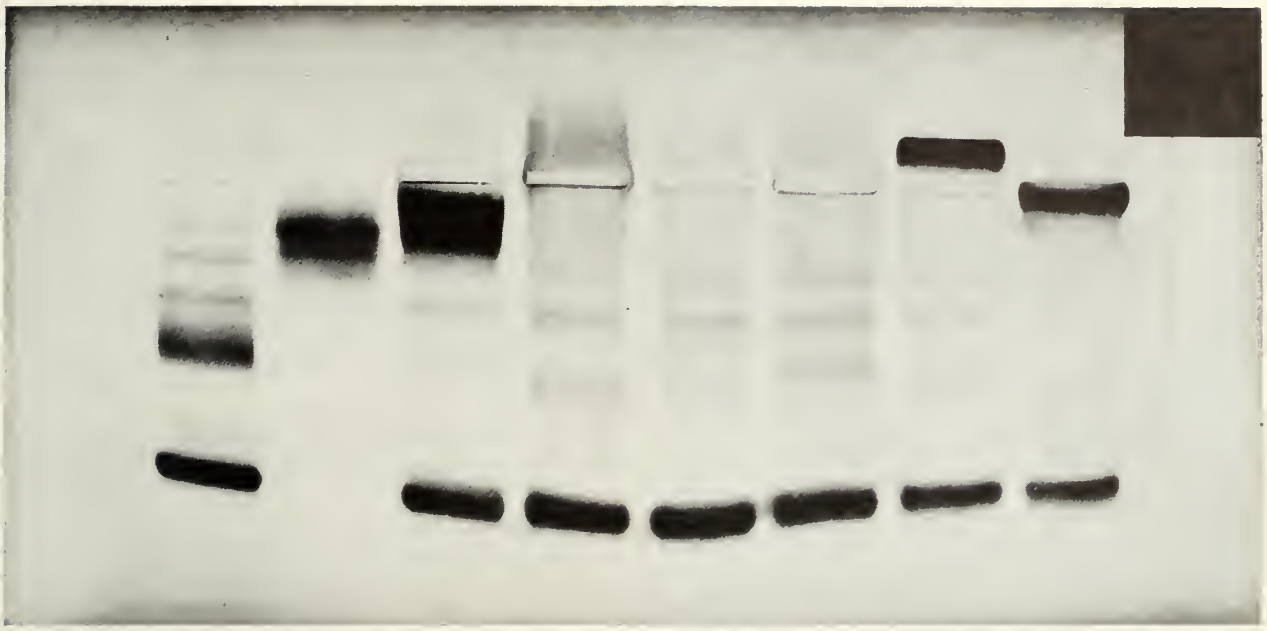


Fig. 1 — Agarose Electrophoresis. Eight sera are included on this plate. From bottom (positive) to top (negative): Albumin, alpha-1, alpha-2, fast beta (transferrin), slow beta, beta lipoprotein and immuno globulin. From left to right 1) Marked elevation of alpha-2, 2) Urinary concentrate-Bence-Jones protein, 3) Serum of patient whose Bence-Jones protein is noted in position 2. A large amount of Myeloma protein (IgA type) is present in the beta zone. 4) Moderate hyperimmunoglobulinemia, 5) Low alpha-2 globulin – hemolytic anemia, 6) Normal, 7) Multiple Myeloma (IgG type), 8) Waldenstrom's Macroglobulinemia.

is increased. Still, molecular-sieve electrophoresis is of greatest use to the investigator for whom the complexity of the patterns obtained (Fig. 3) offer a fruitful field for further research. For example, the serum hyperviscosity states accompanying myeloma resulting from protein polymerization can be examined in detail. (See article on viscosity elsewhere in this issue.)

Analysis

Results obtained from protein electrophoresis require, above all, careful visual examination. Slightly aberrant locations of abnormal bands in the alpha and beta regions can be suspected even though the numerical values for the same areas yield no information of note. Visual examination is particularly valuable in the agarose gel system in which eight samples are run simultaneously under identical conditions. Small alterations in the position of individual fractions can be observed. The location of aberrant bands emphasizes that although dysproteinemic fractions may be of low concentration rarely is their mobility identical to normal components. Thus their presence is manifest by an abnormality in speed of migration rather than concentration.

Laboratories performing electrophoresis usually derive their values from densitometric scanning (Fig. 4). The great majority of such devices are designed to produce a non-linear response to a linear change in the amount of light received. This non-linear "correction" concept dates from the beginning of protein-chemistry and does not apply to present day methods in optically clear systems. Although the absolute data are often very wrong, this is of little consequence when a laboratory has carefully established its range of normal and performs each run under stringent conditions. The values obtained represent a reproducible artefact which has clinical meaning. Ideally, analysis of electrophoretic strips should be carried out with a linear-response densitometer on an optically clear medium, i.e.; cleared cellulose acetate, agar, agarose or acrylamide. At present there is only one such instrument available.* This instrument has a wide range of sensitivity and responds linearly to changes in optical density. This instrument makes possible the recovery of actual protein content of a sample in milligrams per 100 ml; accuracy only roughly approximated with other devices.

Since so few laboratories employ the dye-dilution method it will not be described in detail. It is comparable to accurate linear densitometric devices, hence, is far superior to the conventional scanning methods.

Application

The reasons physicians employ protein electrophoresis vary with their interest. The hematologist uses it to detect multiple myeloma or other dysproteinemias, the pediatrician to check for hypo- or agammaglobulinemia,

*EC810 linear densitometer, E. C. Corp., Inc., Philadelphia, Pennsylvania.

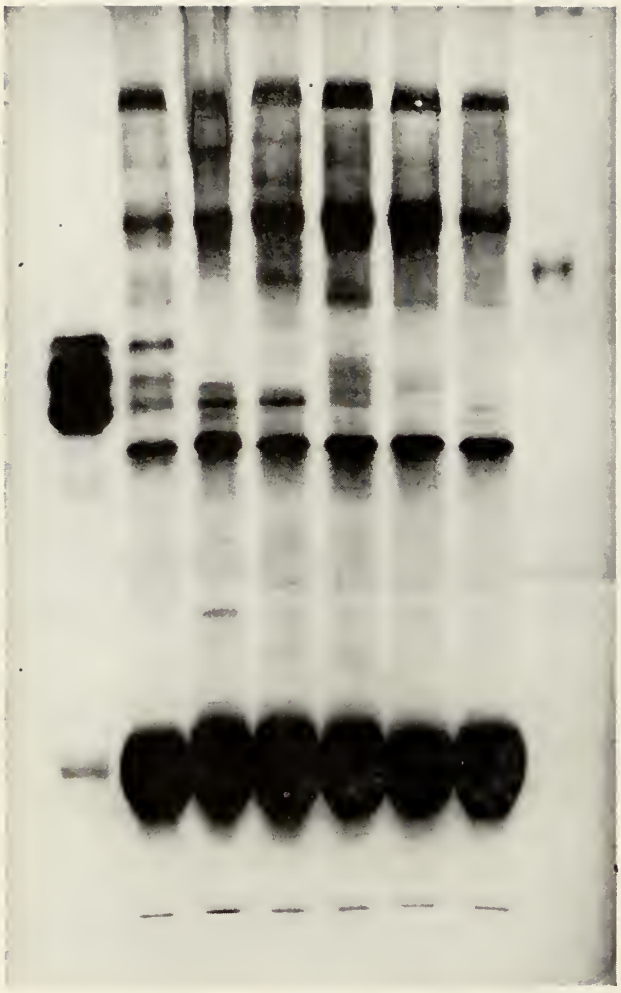


Fig. 2 – High resolution acrylamide electrophoresis. Positive pole at the bottom, negative at the top. Many more fractions are resolved and genetic variations are clearly seen.

the rheumatologist to determine chronicity and activity of immunologic diseases. Although the amount of specific diagnostic data that can be obtained is limited, certain clinical areas are complimented by blood protein studies:

- Chronic infection
- Repeated infection
- Fever of unknown etiology
- Drug reactions
- Rheumatic disease
- Raynaud's phenomenon
- Hepatic disorders
- Renal failure
- Proteinuria
- Unexplained anemias
- Hemolytic processes
- Hyperviscous states
- Unexplained sedimentation rate elevation
- Back pain in patients over 40
- Bone lesions by x-ray
- Pathologic fractures

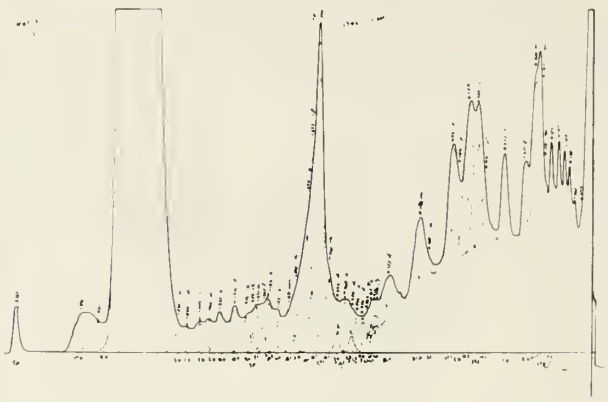


Fig. 3 – Densitometric scan of high resolution acrylamide strip. The complex pattern has been partially resolved with an analog computer. Despite much superior resolution, overlap of fractions is still obvious. The small pre albumin peak is to the far left, the large flat-topped peak is albumin, the central spike is transferrin and the multiple peaks to the right are haptoglobins.

- Lymphoma
- Amyloidosis
- Clinical enigmas

Interpretation

To interpret a set of electrophoretic values requires knowledge of the nature of the 7 protein components and how they vary in health and disease. When these numbers are combined with clinical information, interpretation becomes far more meaningful.

Albumin: This fraction is, for all practical purposes, only albumin. There are several minor components which compromise less than 5% of the total. Depressed levels occur in: inanition, starvation, chronic infection, chronic immunologic processes, prolonged fever, burns, nephrosis and hepatic disease. Elevated levels are rarely seen except in dehydration. Total absence of albumin is a rare genetic defect.

Alpha-1: Alpha 1 antitrypsin, a trypsin inhibitor, is the predominant protein in this fraction. An elevation of alpha-1 and alpha-2 globulin occurs in active inflammation. Occasionally, a solitary elevation of alpha-1 globulin occurs. The significance of this is unknown. Marked depression or absence may occur as a genetic variation and has been shown to correlate well with certain forms of chronic pulmonary disease.

Alpha-2: At least 15 different protein species make up this large peak. Haptoglobin and alpha-2 macroglobin are the predominant fractions comprising over 60% of the total. Elevation of the haptoglobin – sometimes to 10 times its normal level – indicates an active inflammatory process which can be stimulated by a number of states: rheumatoid arthritis, tuberculosis, cancer, burns. Marked elevation of alpha-2 macroglobin occurs in the nephrotic syndrome. It must be pointed out, however, that healthy children have levels significantly above that

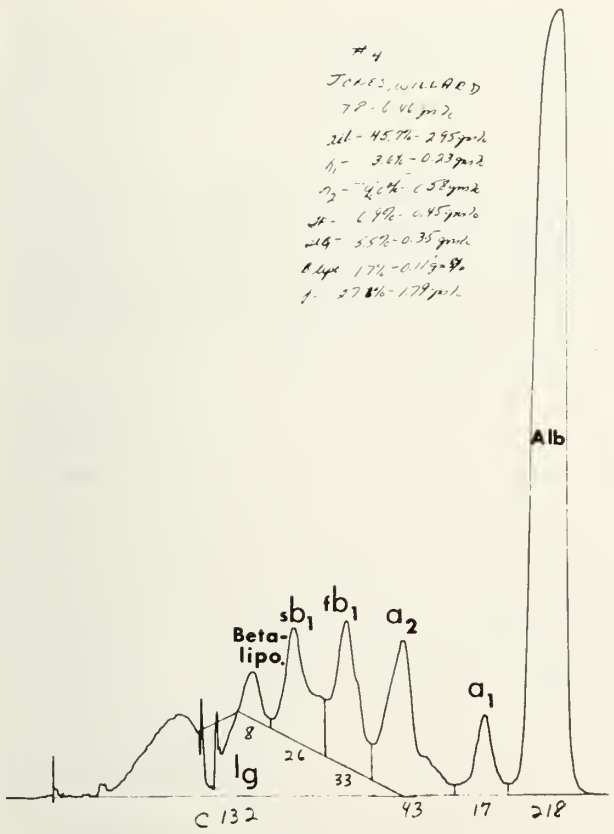


Fig. 4 – Densitometric scan of an agarose electrophoretic strip. Each peak represents an electrophoretic fraction. The broad, roughly triangular area to the left, designated Ig, contains the immunoglobulins.

of a normal adult population. Elevations of the alpha-2 fraction, therefore, can represent active inflammation and/or the nephrotic syndrome. Relative depression of this fraction signifies in almost all instances the removal of haptoglobin from the plasma. Haptoglobin binds free hemoglobin in vivo. The complex is rapidly removed from the circulation accounting for its disappearance during intravascular hemolytic processes and in certain forms of jaundice.

Beta 1: The fast component of beta proteins contains the iron-binding protein transferrin and the heme-binding protein hemopexin. Transferrin levels are of interest in patients with refractory anemia on the basis of an incompetent transport system.

Beta 2: This fraction is composed of several minor proteins. The significance of alterations in these minor proteins is not clear.

Beta-lipoprotein: The predominant fraction in the slow beta zone is beta-lipoprotein. Elevation is found in a variety of hyperlipemic states, such as poorly controlled diabetes and the nephrotic syndrome. In nephrosis there is a differential loss of small protein species through the damaged glomerular membrane.

Gamma Globulin: (Immunoglobulin) The great majority of protein in the region behind – i.e. cathodal – beta lipoprotein is gamma globulin. A significant number of related proteins migrate in the alpha and beta zones. Computation of this fraction on the basis of detailed studies is being performed in our laboratory (Fig. 4). With this technique the "gamma globulins" with beta and alpha mobility are included in the total value termed more correctly "immunoglobulin." Diffuse elevation in this fraction signifies a chronic immunologic process such as accompanies rheumatoid arthritis, systemic lupus erythematosus, tuberculosis, osteomyelitis or sarcoidosis. Significant elevations require several months of immunologic stimulation. Depressions present a real problem to physicians and laboratories without additional sophisticated techniques to document such values by other techniques. Levels of gamma globulin above 0.3 gm% rarely, if ever, indicate clinically significant hypogammaglobulinemia. Values below this are usually significant.

Abnormal peaks: Fractions which do not coincide with the normal, comprise two categories: 1) genetic variants, that is, essentially normal proteins with electrophoretic mobility slightly different from expected. Variants of this type are most commonly seen in the alpha-1 and alpha-2 areas. 2) "M" components: abnormal bands usually of considerable size that represent protein production by a neoplastic clone of plasma cells, lymphocytes or reticulum cells. The mobility of "M"onoclanal components may coincide closely with normal bands usually in the beta or gamma zones. These fractions are abnormal immunoglobulins: IgG, IgA, IgM or IgD. In addition, patients with L chain proteinuria (Bence-Jones or related proteins) and compromized renal function may have the same fraction in their serum, i.e. Bence-Jones proteinemia. Patients with dysproteinemia and renal failure often have two abnormal components, one the myeloma protein, the other, L chain. In all these cases, L chain will also be found in the urine. It should be stressed that a significant number of patients with dysproteinemia have no serum electrophoretic abnormality, but only urinary L chain. The disease in this case is a variant of myeloma designated "L chain disease."

Multiple abnormalities: Elevation of both alpha-1 and alpha-2 globulin is frequently found in patients with inflammatory or immunologic disease. Furthermore, when the alpha elevation is marked, inflammatory renal disease, i.e. glomerulonephritis, etc., is suggested.

Elevation of alpha-2 and gamma globulin indicates an acute superimposed on a chronic process. This finding is of particular significance in the patient with an immunologic disorder early in its clinical course, i.e. rheumatoid arthritis, SLE, asthma, etc. It implies long-standing subclinical disease in addition to an acute process.

Elevation of alpha-2 and beta-lipoprotein often occurs in the nephrotic syndrome (without glomerulitis) as well as in poorly controlled diabetes mellitus, usually with overt diabetic renal disease.

Because both transferrin and albumin are produced in the liver, depressed values suggest that significant hepatic disease is present.

Many abnormal electrophoretic values require further study. High resolution electrophoresis, immunoelectrophoresis and immunochemical techniques are often required but rarely available away from specialized laboratories. These methods are costly and temperamental. For this reason they are rarely satisfactory outside laboratories in which personnel continually perform them in large numbers and devote a majority of their time to the investigation of plasma proteins.

We have stated that serum protein electrophoresis will be replaced by new techniques of protein assay. While electrophoresis will remain for several years a stop-gap clinical tool, several laboratories will replace electrophoresis with large scale automated plasma protein immunoassay. Using appropriate antisera, as many as 16 plasma proteins can be automatically identified and quantitated. As sex and age may affect protein synthesis, correction of the measured values must be made. This research is well underway. In the future, electrophoretic assay will remain a non-quantitated screening method to augment the immunologic analysis.

The "Not So Apparent" pK'*

WILLIAM H. AUSTIN, M.D. and BOBBY J. STINEBAUGH, M.D.

Most physicians accept a pK' value of about 6.1 for the bicarbonate buffer system. Others have noted that the true pK' for the dissociation of carbonic acid is 3.7 and consider that the 6.1 value to include a "fudge factor" which allows the treatment of all the dissolved CO_2 as H_2CO_3. This tends to couch a basic physical chemical phenomenon: that the "apparent" pK' is actually a *true* pK' for the overall reaction $H_2O + CO_2 \rightleftarrows H_2CO_3 \rightleftarrows H^+ + HCO_3^-$ and 6.1 is the sum of the constants for the component reactions. The following mathematical documentation of this statement is of both chemical and physiological interest.

Let us consider the equilibrium expressed or implied by the Henderson-Hasselbalch equation.**

$$(1)\quad pH = 6.1 + \log \frac{(HCO_3^-)}{(H_2CO_3)}$$

This is the classical form of the equation. However, since dissolved carbon dioxide is in equilibrium with true carbonic acid we must first concern ourselves with the reaction:

$$(2)\quad CO_2 + H_2O \rightleftarrows H_2CO_3$$

This can be expressed quantitatively by

$$(3)\quad \frac{(H_2CO_3)}{(CO_2)} = K^h;\ K^h = \text{hydration constant for } CO_2.$$

Expressed in terms of negative logarithms, this becomes

$$(4)\quad \log \frac{(CO_2)}{(H_2CO_3)} = pK^h$$

The pK^h for this reaction is approximately 2.4, indicating that the dissolved CO_2 is about 250 times as abundant as true H_2CO_3.

Now consider the dissociation of carbonic acid:

$$(5)\quad H_2CO_3 \rightleftarrows H^+ + HCO_3^-$$

This can be expressed quantitatively as

$$(6)\quad \frac{(H^+)\ (HCO_3^-)}{(H_2CO_3)} = k^i;\ k^i = \text{ionization constant for } H_2CO_3.$$

By the use of negative logarithms this becomes:

$$(7)\quad pH = pK^i + \log \frac{(HCO_3^-)}{(H_2CO_3)} \text{ or}$$

$$pH = pK^i + \log (HCO_3^-) - \log (H_2CO_3)$$

The pK' for this reaction is about 3.7 and not 6.1 as is suggested by equation 1. To understand this apparent discrepancy it must be realized that H_2CO_3 (eq. 1) represents something other than true carbonic acid. This may be appreciated through some algebraic manipulations of equations (4) and (7).

A modification of equation (4) from:

$\log \frac{(CO_2)}{(H_2CO_3)} = 2.4$ to $\log (CO_2) - \log (H_2CO_3) = 2.4$ or,

$\log (H_2CO_3) = \log (CO_2) - 2.4$ is the first step.

Substituting this value for $\log (H_2CO_3)$ into equation (7) gives:

$$(8)\quad pH = 3.7 + \log (HCO_3^-) - [\log (CO_2) - 2.4]$$

$$(9)\quad = 3.7 + \log (HCO_3^-) - \log (CO_2) + 2.4$$

$$(10)\quad = 3.7 + 2.4 + \log (HCO_3^-) - \log (CO_2)$$

*From the Cardio-renal Research Department, Maine Medical Center, Portland, Maine 04102.

**We have omitted a consideration of activity vs. concentration, as it has been treated elsewhere (1,2).

$$(11) \qquad = 6.1 + \log \frac{(HCO_3^-)}{(CO_2)}$$

It should now be apparent that when this equation is written:

$$pH = 6.1 + \log \frac{(HCO_3^-)}{(H_2CO_3)} \qquad \text{(Equation 1)}$$

that "H_2CO_3" in reality means dissolved CO_2 or "potential H_2CO_3." 6.1 is therefore, a *true* constant as it is sum of the pK"s for the hydration reaction for CO_2 and the dissociation reaction for carbonic acid.

A more useful form of this equation can be obtained by the introduction of a factor which allows the use of PCO_2 instead of (CO_2) or "H_2CO_3." Such a factor can be obtained by appropriate conversion of the Bunsen Solubility Coefficient. The Bunsen Solubility Coefficient α, expresses the number of milliliters of a gas that will dissolve in one ml of plasma (.520 ml CO_2/ml plasma/Atm.) at 37°C. By dividing α by 760, multiplying by 1000 and then again dividing by 22.26 a "solubility factor" is obtained. This new factor, which has been designated S, has a numerical value of .0307 (mM CO_2/L/mm Hg. PCO_2), and when multiplying by the PCO_2 defines the number of mM of dissolved CO_2 which will arise per mm partial pressure of CO_2 (i.e. PCO_2 $0.0307 = H_2CO_3$). Thus the Henderson-Hasselbalch equation may be written:

$$(12) \quad pH = 6.1 + \log \frac{(HCO_3^-)}{.0307\ PCO_2}$$

These manipulations could be logically extended to include the solubility factor into the pK'.

$$(13) \quad PCO_2 \rightleftharpoons CO_2 + H_2O \rightleftharpoons H_2CO_3 \rightleftharpoons H^+ + HCO_3^-$$

Since we have established that

$$CO_2 = .0307\ PCO_2$$

then

$$.0307 = \frac{(CO_2)}{PCO_2}$$

Taking the negative log of this we have,

$$1.5 = \log \frac{PCO_2}{(CO_2)} \quad \text{or, } \log PCO_2 - \log CO_2$$

or, $-\log CO_2 = 1.5 - \log PCO_2$

Substituting into equation 10

$$pH = 3.7 + 2.4 + 1.5 - \log PCO_2 + \log HCO_3^-$$

or,

$$(14) \quad pH = 7.6 + \log \frac{(HCO_3^-)}{PCO_2}$$

The addition of the factor 1.5 makes 7.6 the *true* pK' for the overall reaction shown in equation 13, and the CO_2 in the gas phase becomes *potential* H_2CO_3, or potentially available H_2CO_3.

We usually consider the bicarbonate buffer system to be chemically ineffective because its pK' (6.1) is too far from the blood pH. The actual effectiveness of the system has been attributed to the lungs which rapidly alter PCO_2 hence, H_2CO_3. If we use the pK' for the overall reaction (7.6, eq. 14), we find it is in the physiologic range. Viewed in this light, the carbonic acid buffer system is, in its own right an effective physical-chemical buffer. Its effectiveness is of course facilitated by the lung's ability to alter PCO_2 ("potentially available H_2CO_3") and the kidney's metabolic control over HCO_3^-.

These considerations help clarify the complex nature of pK' and emphasize the concept that CO_2 in the gas phase or in dissolved form is *potentially available* carbonic acid. Incorporation of the solubility factor into the pK' simplifies the notation of the Henderson-Hasselbalch equation and presents the carbonic-acid-buffer system in more physiological terms.

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2. Smith, H. W.: Principles of renal physiology. New York: Oxford University Press, 1956.

ANNUAL MEETING DATES FOR YOUR 1969 CALENDAR

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American Medical Association, July 13-17, 1969, New York, New York

The Clinical Applications of Serum Viscometry*

Peter W. Rand, M.D.

Within the last decade circulation research has witnessed a great resurgence of interest in blood viscosity. Ever since Wells, in 1961[1] re-emphasized that whole blood viscosity increases exponentially as flow slows, investigators have attempted to define the fluid properties of blood more precisely, to analyze the influences of plasma and cellular factors on viscosity, and to search for relationships which would be useful in the evaluation of human illnesses. As a result, our understanding of the variables which affect the viscosity of whole blood has been vastly increased, and, at the same time, many promising directions for future research have emerged. The primary goal of this work is to provide the clinician with an effective method of improving blood flow in the many conditions characterized by decreased tissue perfusion.

Although whole blood viscosity data is of hemodynamic interest, it has limited clinical usefulness because it represents the complex interaction of many cellular and plasma factors. In the diagnosis and monitoring of hyperviscosity conditions much more specific information is obtained through evaluation of these individual factors. Current research is aimed at determining quantitatively the relationship between blood viscosity and tissue perfusion. When this knowledge is available the value of this test to clinician and investigator alike will increase immeasurably.

The same cautionary attitude does not apply to plasma or serum viscosity measurements. These are useful not only in analyzing the fluid characteristics of whole blood, but particularly in detecting protein abnormalities. In liquids containing one species of a large molecule in solution, viscometry is used to determine the average molecular weight of the solute. In plasma or serum, deviations from expected viscosity values at a given protein concentration indicate the presence of abnormally heavy, large, or irregularly shaped protein molecules. Although further correlative studies must be done to document the influence of each abnormal protein, the finding of an elevated viscosity in normally hydrated plasma or serum indicates a dysproteinemia, and, with extreme elevation, points to the presence of a more specific variety of protein macromolecule. Frequently cold-precipitable proteins (cryoglobulins) complicate these conditions, or appear by themselves in otherwise normal plasmas. Their presence is easily detected by comparison of observed and expected serum viscosity values at hypothermic temperatures.

When plasma viscosity reaches a sufficiently high level the resulting microcirculatory stagnation may produce mucous membrane bleeding, retinopathy, loss of vision, neurological symptoms, Raynaud's phenomenon and even cardiac failure. These symptoms, which have been grouped under the label "hyperviscosity syndrome,"[2] correlate with the level of serum viscosity, although the absolute value associated with their onset will vary from patient to patient. Viscometry provides specific information upon which treatment – usually plasmapheresis or chemotherapy – may be based.

In view of the spiraling numbers of sophisticated, complex, and expensive laboratory procedures which currently deluge the physician and bankrupt his patient, it would seem a service to describe a test which is as simple as running a stopwatch, requires no reagents and a minimal amount of glassware, is exquisitely accurate and reproducible, and has a great value as a screening, diagnostic, and follow-up procedure. For the last several decades investigators have measured plasma or serum viscosity with viscometers of various design, and at many different temperatures, making comparison of data or definition of normal difficulty. A project is currently being conducted in this laboratory to establish the limits of normal plasma and serum viscosity over a wide temperature range using a standard method, and to investigate the influences of proteins, water, and other factors on viscosity. It is the purpose of this paper to describe this viscometric technique, to report these normal values, and to demonstrate the effect of various disease states on plasma* and serum viscosity.

Materials and Methods

The equipment needed for serum viscosity measurements is shown in Figs. 1 and 2.

1) As many as 2 ml** Ostwald viscometers as needed.
2) 2.5 cm lengths of 5 mm I.D. plastic tubing to fit the narrow arm of the viscometer.
3) One 20 ml glass syringe, 18 cm of plastic tubing to fit it, and a tapered glass adapter.
4) One thermoregulated water bath adequate to control temperature within 0.1°C.***

*From the Research Department of the Maine Medical Center, Portland, Maine 04102. Supported by grants from the National Institute of Health (HE 07984-06) and the Maine Heart Association.

*Because fibrinogen exerts a strong viscous influence and varies widely in concentration, serum, rather than plasma, should be used for evaluation of abnormal proteins. Plasma values should be used when relating to whole blood viscosity or studying the effect of fibrinogen.

**Metro Scientific Inc., Karl Place, Long Island, N.Y., Cat. No. M-34220. If one is not concerned about the volume of the sample, tubes requiring up to 4 ml may be obtained from any scientific supply house.

***Such as Fisher – No. 13-619-1V2, although a similar system can be homemade with considerable saving.

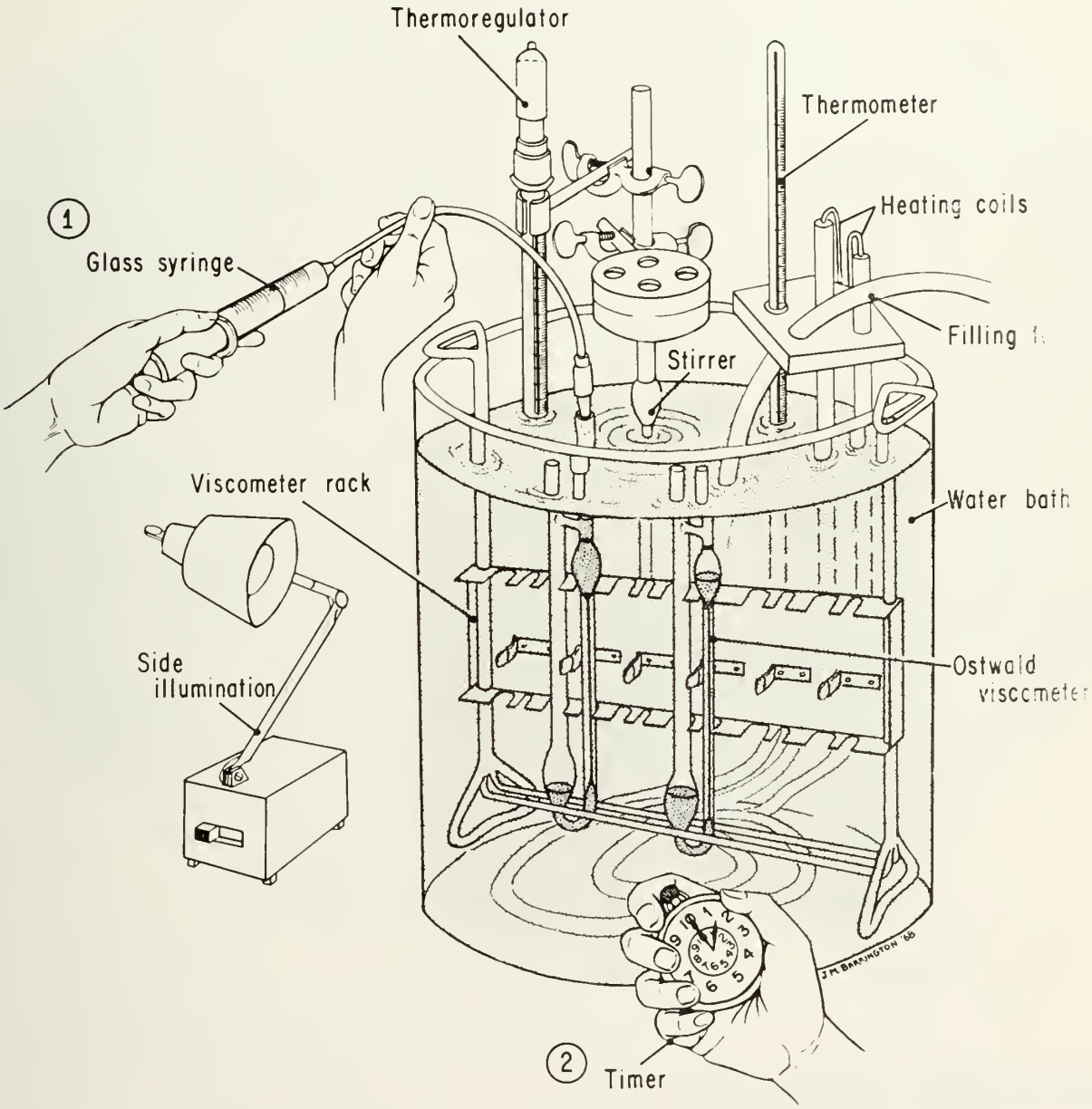


Fig. 1. Apparatus for plasma or serum viscometry. (1) Sample being drawn up. (2) Timing descent of meniscus. Rack must hold viscometer tubes in perfectly vertical position. Side lighting accentuates meniscus.

5) A homemade Ostwald pipette rack.

6) At least one stopwatch, accurate to 1/10 second.

Cells should be removed by centrifugation at 3000 RPM for 20 minutes. The supernatant is then recentrifuged briefly prior to use. To measure viscosity, 2.0 ml of sample is delivered by volumetric pipette to the wide arm of the viscometer and allowed to equilibrate with the water bath, which, unless the effects of temperature are being studied, is set at 37.0°C. By means of the syringe attached to the narrow arm the serum is then drawn above the upper mark, but not above the surface of the bath water. The syringe is detached and the time measured for the descent of the serum meniscus from the upper to the lower marks. In practice, 3 readings are taken on each sample, or more if there is not agreement within 0.5 sec. Inaccuracies are usually caused by bubbles or suspended particles which are easily seen.

To calibrate each viscometer,[3] the same procedure is followed using an identical quantity of distilled water in place of serum. Ten readings (which should fall within a range of 0.6 seconds) are taken at 37°C and their average is inserted as t in the formula $C = v/t$, where v is the viscosity of water (0.69934 at 37°C).[4] Sample viscosities are calculated by multiplying the average descent time by the C factor for the viscometer used. The units are expressed as centistokes.*

*Centistokes x density = centipoise, the unit of absolute vis-

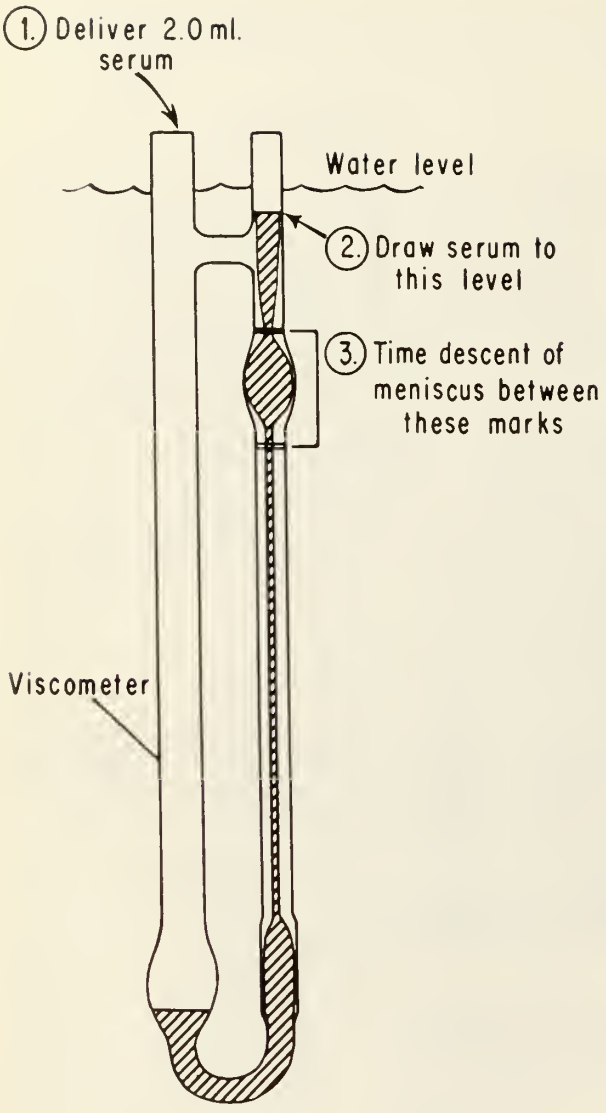


Fig. 2. Detail of Ostwald viscometer.

cosity. Since variations in serum density are minor in relation to viscosity changes, this conversion is not usually made.

Because the accuracy of these instruments is easily altered by precipitates which are difficult to see, a rigid cleaning discipline, including the frequent use of acid dichromate solution, is essential. The viscometers must be thoroughly dried before use. Repeat calibrations should be performed regularly.

For the purpose of this study, viscosity measurements were performed at 42°C, 37°C, 32°C, 27°C, and 22°C on serum, plasma or both, from venous blood samples drawn from 216 normal donors of both sexes from 19 to 58 years of age. Criteria for normalcy included the absence of overt illness, no history of significant disease, and a corrected Wintrobe sedimentation rate of less than 10mm/hr. 0.1 ml sodium Heparin (1000U/cc) prevented the 10 ml plasma samples from clotting.

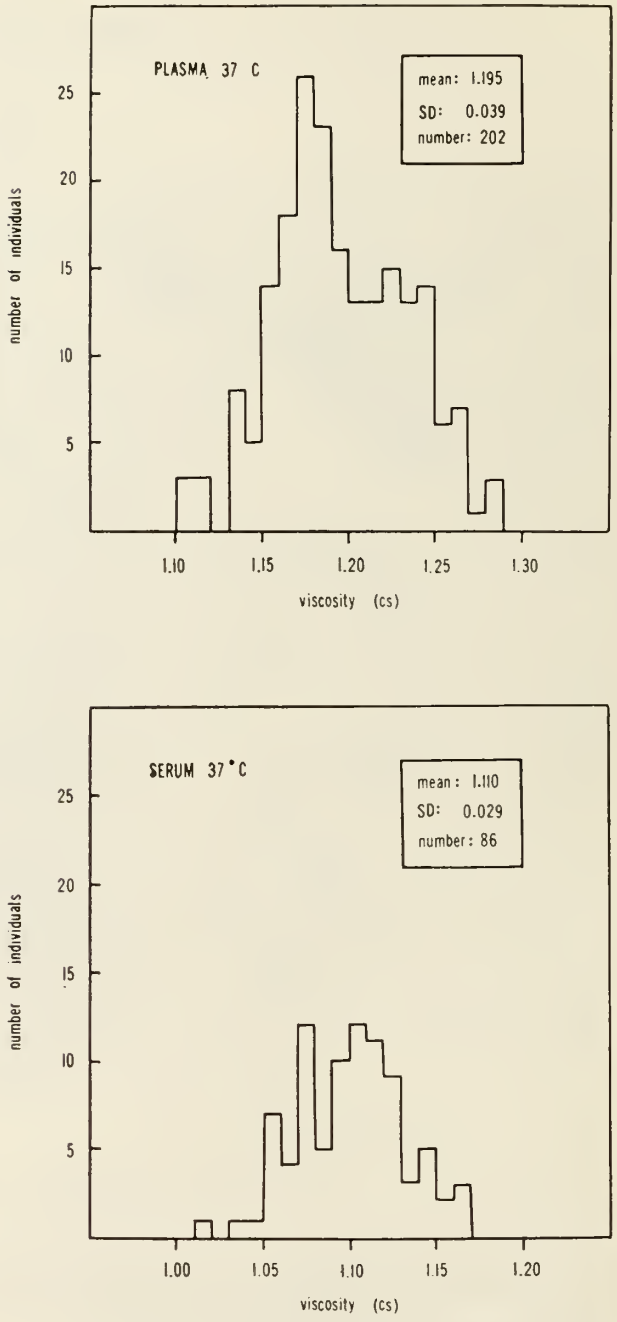


Fig. 3. Histograms for normal plasma and serum viscosity values at 37°C.

Results

Fig. 3 presents the histograms, means and standard deviations of normal plasma and serum viscosity determinations at 37.0°C. The data appear to assume "normal" distributions within narrow limits for both plasma and serum. It will be noted that the presence of normal concentrations of fibrinogen produces a 0.1 cs increase in viscosity and widens standard deviations slightly.

As age increases it becomes increasingly difficult to find people who fit the rigid criteria for normalcy. In those who do, no age-related viscosity differences have

Continued on Page 15



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Warnings—Watch for the earliest manifestations of thrombotic disorders (thrombophlebitis, cerebrovascular disorders, pulmonary embolism, retinal thrombosis); if present or suspected discontinue the drug immediately.

British studies reported in April 1968[1,2] estimate there is a seven- to tenfold increase in mortality and morbidity due to thromboembolic diseases in women taking oral contraceptives. In these controlled retrospective studies, involving 36 reported deaths and 58 hospitalizations due to "idiopathic" thromboembolism, statistical evaluation indicated that the differences observed between users and non-users were highly significant. The conclusions reached in the studies are summarized in the table below:

Comparison of Mortality and Hospitalization Rates Due to Thromboembolic Disease in Users and Non-Users of Oral Contraceptives in Britain.

Category	Mortality Rates		Hospitalization Rates (Morbidity)
	Age 20-34	Age 35-44	Age 20-44
Users of Oral Contraceptives	1.5/100,000	3.9/100,000	47/100,000
Non-Users	0.2/100,000	0.5/100,000	5/100,000

No comparable studies are yet available in the United States. The British data, especially as they indicate the magnitude of the increased risk to the individual patient, cannot be applied directly to women in other countries in which the incidences of spontaneously occurring thromboembolic disease may differ.

Discontinue medication pending examination if there is sudden partial or complete loss of vision, or sudden onset of proptosis, diplopia or migraine. Withdraw medication if papilledema or retinal vascular lesions are found.

Since the safety of Ovulen in pregnancy has not been demonstrated, it is recommended that pregnancy be ruled out for any patient who has missed two consecutive periods before continuing the contraceptive regimen. If the patient has not adhered to the prescribed schedule the possibility of pregnancy should be considered at the first missed period.

A small fraction of the hormone agents in oral contraceptives has been identified in the milk of mothers receiving these drugs. The long-range effect to the nursing infant cannot be determined at this time.

Precautions—Pretreatment physical examination should include special reference to the breasts and pelvic organs, and a Papanicolaou smear.

Endocrine and possibly liver function tests may be affected by Ovulen. Therefore, it is recommended that such tests if abnormal be repeated after the drug has been withdrawn for two months.

Pre-existing uterine fibromyomas may increase in size under the influence of progestogen-estrogen preparations.

Because these agents may cause some degree of fluid retention, conditions which might be influenced by this factor, such as epilepsy, migraine, asthma, cardiac or renal dysfunction, require careful observation.

In breakthrough bleeding, and all irregular vaginal bleeding, consider nonfunctional causes. Adequate diagnostic measures are indicated in undiagnosed vaginal bleeding.

Carefully observe patients with a history of psychic depression and discontinue the drug if severe depression recurs.

Any possible influence of prolonged Ovulen therapy on pituitary, ovarian, adrenal, hepatic or uterine function awaits further study.

A decrease in glucose tolerance has occurred in a significant percentage of patients on oral contraceptives. The mechanism of this decrease is obscure. For this reason, diabetic patients should be observed carefully while receiving Ovulen.

Because of the effects of estrogens on epiphyseal closure Ovulen should be used judiciously in young patients in whom bone growth is not complete.

The age of the patient constitutes no absolute limiting factor, although Ovulen therapy may mask the onset of the climacteric.

The pathologist should be informed of Ovulen therapy when relevant specimens are submitted.

Adverse Reactions—A statistically significant association has been shown between use of oral contraceptives and the following serious adverse reactions: thrombophlebitis, pulmonary embolism.

Although available evidence is suggestive of an association, such a relationship has been neither confirmed nor refuted for the following serious adverse reactions: cerebrovascular accidents, neuro-ocular lesions, e.g., retinal thrombosis and optic neuritis.

The following adverse reactions are known to occur in patients receiving oral contraceptives: nausea, vomiting, gastrointestinal symptoms (such as abdominal cramps and bloating), breakthrough bleeding, spotting, change in menstrual flow, amenorrhea during and after treatment, edema, chloasma or melasma, breast changes (tenderness, enlargement, secretion), change in weight, changes in cervical erosion and cervical secretions, suppression of lactation when given immediately post partum, cholestatic jaundice, migraine, allergic rash, rise in blood pressure in susceptible individuals, mental depression.

Although the following adverse reactions have been reported in users of oral contraceptives, an association has been neither confirmed nor refuted: anovulation post treatment, premenstrual-like syndrome, changes in libido, changes in appetite, cystitis-like syndrome, headache, nervousness, dizziness, fatigue, backache, hirsutism, loss of scalp hair, erythema multiforme and nodosum, hemorrhagic eruption, itching.

The following laboratory results may be altered by oral contraceptives: hepatic function: increased sulfobromophthalein and other tests; coagulation tests: increase in prothrombin, Factors VII, VIII, IX and X; thyroid function: increase in PBI and butanol extractable protein bound iodine, and decrease in T^3 uptake values; metyrapone test; pregnanediol determination.

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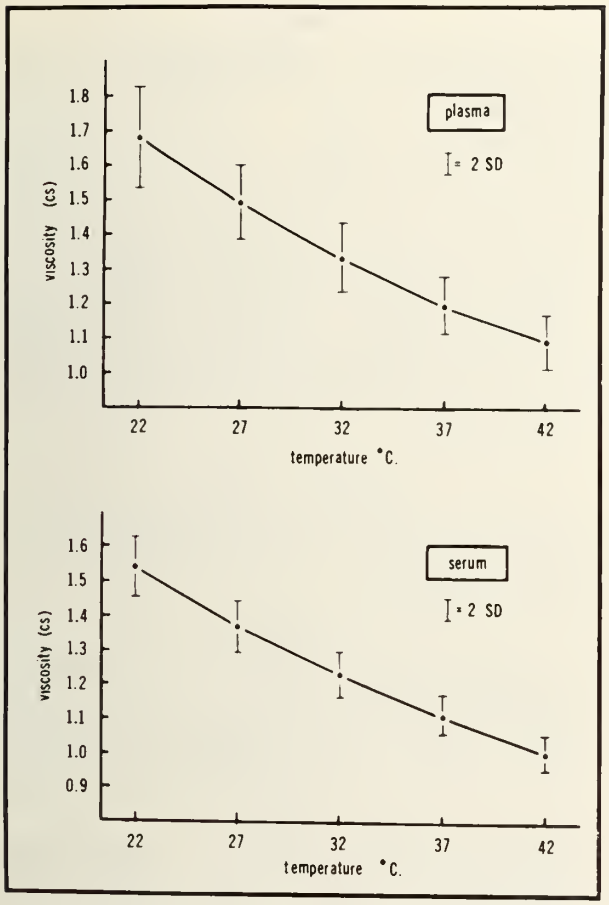


Fig. 4. The effect of temperature on normal plasma and serum viscosity.

appeared, although the study is incomplete. Sex differences are slight and certainly not significant, as can be seen from Table 1.

TABLE 1

PLASMA AND SERUM VISCOSITY VS. SEX

	Plasma Viscosity			*Serum Viscosity*		
	Mean	*SD*	*N*	*Mean*	*SD*	*N*
Males	1.183	.037	62	1.107	.026	24
Females	1.203	.038	106	1.107	.028	35

The response of plasma and serum viscosity to temperature change from 42°C to 22°C is shown in Fig. 4. Mean values ± 2SD are plotted. The slope of these curves increase gently with decreasing temperatures and the limits of normal spread slightly, indicating varying degrees of polymerization, aggregation, and precipitation of normal serum proteins below physiologic temperatures. Actually, the slope of the viscosity-temperature curve for water is only slightly less than those shown for normal serum or plasma.*

*0.63, 0.69, 0.77, 0.85 and 0.96 for water at 42°C, 37°C, 32°C, 27°C and 22°C, respectively.[4]

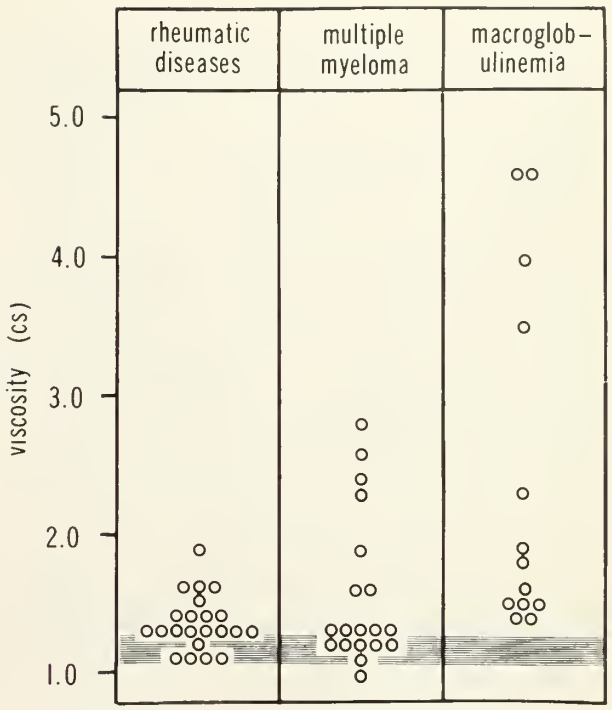


Fig. 5. Accumulated plasma and serum viscosity data from patients with rheumatic diseases, myelomas, and macroglobulinemia. Shaded area includes 1 SD of normal values for both serum and plasma.

DISCUSSION

The viscosity of serum is dictated by the concentrations, shapes, sizes, and densities of the constituent protein molecules. Its clinical value lies, therefore, in the evaluation of dysproteinemias characterized by abnormalities of the immune globulins. Foremost examples are the rheumatic diseases, multiple myeloma, and Waldenström's macroglobulinemia. In these conditions plasma cells or their precursors overproduce large asymmetric protein molecules which, in turn, may generate far larger particles through polymerization, aggregation, or complex formation. It is important to realize that because varying concentrations or configurations of protein molecules will be present in an individual patient's serum at a given point in his disease, viscosity values up to a certain level will not be of help in differentiating one type of protein abnormality from another, although they will indicate the need for more specific tests. Serum viscosity values above 2.0 cs strongly suggest a diagnosis of multiple myeloma, or macroglobulinemia, the latter diagnosis being more likely the higher the viscosity value.

Fig. 5 represents plasma or serum viscosity data from patients whose diagnoses were established by antinuclear antibody and rheumatoid factor titers plus agarose and immunoelectrophoresis.* Several individuals who had

*Kindly performed by the Maine Medical Center Rheumatic Disease Laboratory.

minimal disease showed normal or slightly elevated viscosity levels. The impressive effect of myeloma proteins and macroglobulins is evident. Not shown are the abnormally low viscosity levels found in patients with low serum protein concentrations, whether from diminished production (i.e. hypogammaglobulinemia) or excessive loss (nephrosis) of serum proteins. Because the nephrotic glomerular basement membrane retains larger protein molecules, but allows smaller ones to escape, serum viscosity levels will be higher than would be expected at the patient's level of total protein concentration.

One condition which may be specifically diagnosed with an Ostwald viscometer is cryoglobulinemia. Frequently myeloma proteins, and, as noted by Waldenström,[5] macroglobulins, produce greater increments in serum viscosity per degree of cooling than do normal proteins. Cryoglobulinemia should be suspected in these conditions, although it also appears as an isolated entity. Because serum viscosity may already be elevated at 37°C in these dysproteinemias, the presence of cryoglobulins is diagnosed by an increased slope of the viscosity-temperature curve (See Fig. 4), rather than by the absolute value at a given low temperature.

Viscometry may also be used to provide a rapid assessment of the concentration of serum proteins, as well as to detect the presence of abnormal proteins. In this regard it is useful in the management of patients with fever, vomiting or diarrhea, burns, and other potentially dehydrating conditions, when used in conjunction with electrolyte and osmolality determinations.

Many other applications for serum viscometry exist, and the literature regarding its determinants and effects is voluminous. Recently an excellent comprehensive review has been published[6] which is recommended to those wishing further information regarding this subject.

Summary

Although analysis of the fluid properties of whole blood represent an important and active sector of circulation research, the complex relationships involved are not sufficiently understood to give important clinical significance to the measurement of viscosity in whole blood. Serum viscosity values, however, provide useful information regarding the physical characteristics of the serum proteins, and, therefore, are important adjuncts in the evaluation and treatment of the dysproteinemias.

A standard method for the measurement of serum or plasma viscosity which is simple, accurate, and inexpensive is described, and normal values from 42°C to 22°C are presented. The clinical application of serum viscometry is discussed.

Acknowledgements

The author is indebted to Mrs. Nancy Barker, Mrs. Valerie Ferrante and Mrs. Eleanor Lacombe for technical assistance, to Mrs. Judith Barrington for drawings, and to Mr. James MacKenzie for photographs.

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Metabolic Acidosis in Myocardial Infarction*
A preliminary report

WILLIAM H. AUSTIN, M.D., VALERIE FERRANTE, M.T.(ASCP) AND CAROL CROSBY, R.N.**

The association of metabolic acidosis with myocardial infarction, particularly in the presence of shock, has been well documented.[1,2] Metabolic acidosis is said to occur within 3 days in roughly half of all patients with acute infarction. MacKenzie[2] has stated that in the absence of shock, myocardial infarction does not seem to be a major problem, however, this conclusion was based on a small patient sample. These findings have led to the belief, in some circles, that routine administration of bicarbonate to a patient with frank or suspected myocardial infarction might be an efficacious form of therapy. There is no question that in the presence of shock or arrhythmia that metabolic acidosis is frequently present. However, in the absence of these complications the presence of metabolic acidosis has not been clearly established. In order to examine this problem we studied 80 patients with suspected myocardial infarction and the results support the conclusion that in the absence of shock or arrhythmia, acidosis is not a significant feature.

METHODS

Eighty patients were examined following routine admission to the Coronary Intensive Care Unit of the Maine Medical Center. Those patients with frank pulmonary edema, emphysema, shock or individuals having persistent arrhythmias were excluded from the study. In none of the study subjects did the blood pressure fall below 95 mm of mercury systolic and was always within 15 mm of their recovery pressure. All patients received a slow drip of dextrose and water and were given analgesics to control pain. The study was made as soon as possible after admission. In addition to venous pH and PCO_2, enzyme studies were determined and included: 1) LDH, 2) SGOT and 3) CPK levels. Control acid-base values were determined in 40 healthy individuals ranging in approximately the same age group. The normals for pH and PCO_2 were as follows: pH, 7.34 to 7.42; PCO_2, 39 to 50 mm. Hg. The criteria for acute myocardial infarction were: 1) a clinical diagnosis of the disorder, 2) electrocardiographic findings consistent with an acute M.I. and 3) one or more enzyme changes suggestive of coronary artery disease of an acute nature. Of the 80 patients examined, 40 met the criteria outlined above and were considered to be suffering from acute myocardial infarction. It was determined from the history and from the enzyme changes that the insult occurred, in most cases, within 72 hours prior to study. None of the patients showed any variation in pH from the accepted normal, however, the mean venous PCO_2 was 49 with a range of 37 to 61, which was slightly higher than the control group.

DISCUSSION

It appears from this study that in the presence of uncomplicated myocardial infarction metabolic acidosis is not a feature. There is a mild compensated respiratory acidosis in many of the patients studied. We have tentatively attributed this to the administration of analgesics with the depression of respiration. We cannot rule out the age or intrinsic lung disease, not recognized by clinical evaluation, as a factor. In addition, mild degrees of congestive failure could result in an elevation of PCO_2.

These data indicate that the routine administration of bicarbonate in cases of uncomplicated myocardial infarction is unwarranted. From our own experience and from the studies of others it does seem important to do blood gas determinations on any patient who is hypotensive, has an arrhythmia or is in clinical shock.

Arterial blood is valuable in assessing the oxygenation of the patient, however, we have found that hyperventilation following arterial puncture may produce artifactually low PCO_2. This drop in PCO_2 may occur rapidly and present a distorted picture of the acid-base pattern. For this reason we have routinely examined venous blood as it is known to be unaffected by hyperventilation or changes in cardiac output during the sampling period.

SUMMARY

Metabolic acidosis does not appear to be a feature in uncomplicated myocardial infarction. The use of bicarbonate or other alkalinizing agents must be indicated by actual measurement of acid-base parameters in order to avoid excessive salt loads.

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*This project was supported by a grant from the Maine Heart Association.

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The Expiratory Flow Volume Curve in Localized Airway Obstruction*

George P. Lord, M.D.**

Introduction

The expiratory flow volume curve is a new pulmonary function test introduced in 1958 by Hyatt and Fry.[1] Over the intervening decade it has graduated from the research laboratory[2,3] into the clinic,[4,5] and finally into the field as a screening test for lung disease.[6] The flow volume curve displays expiratory flow rate against expired lung volume during the course of a forced expiration (Fig. 1). Expiratory flow rate depends upon lung volume during the lower one-half to two-thirds of expiration, hence the resulting curve contains more information about airflow than can be directly obtained from the spirogram (for example, lack of patient effort and poor cooperation are readily apparent).

In a given patient the flow volume curve pattern is quite specific for the *degree* of airway obstruction but it is difficult to correlate the pattern of the curve with the *type* of airway obstruction, for example, bronchial asthma versus chronic bronchitis and emphysema. Several cases of localized airway obstruction have been studied in which the pattern *does* suggest the location of the obstructing lesion. The purpose of the present paper is 1) to describe these unusual cases, 2) to propose mechanisms to explain the altered airflow and 3) to use this information to speculate about the nature of airway obstruction in general.

Methods and Materials

The method for recording and analyzing the flow volume curve has been presented previously.[6] Basically, expiratory airflow rate and expired lung volume are recorded from an electronic wedge spirometer (Medical Science Electronics, St. Louis, Missouri), during forced expiration from peak lung inflation (Fig. 1). Flow rate and lung volume are displayed as X and Y coordinates of an expiratory flow volume curve on the face of an oscilloscope. The subject can see his performance and he is encouraged to produce a curve containing maximum area between it and the volume abscissa. Successive curves are superimposed on the first so that the subject can adjust his effort to achieve a maximum performance. Three or more curves are examined on each subject. Internal spirometer temperature is recorded with a thermocouple to convert the volume to body temperature and pressure, saturated. Flow and volume information are recorded on a digital electromagnetic tape for analysis in an IBM computer.

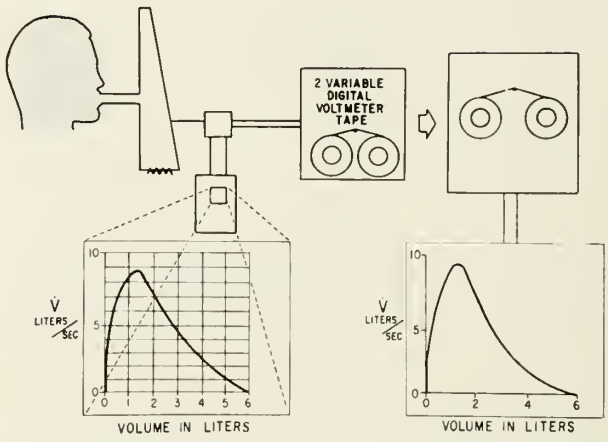


Fig. 1. – The Method of Recording the Flow Volume Curve.

The subject exhales into a wedge spirometer (upper left) producing a flow volume curve on the oscilloscope. Flow rate is plotted on the ordinate in liters per second. Expired lung volume is plotted on the abscissa in liters. Subject produces the curve which has the greatest area between it and the volume axis. Peak lung inflation is at zero volume and the forced expiratory position is at 6 liters.

Results

To understand the data several principles underlying the flow volume curve will be reviewed briefly: During the latter one-half of a vital capacity maneuver airflow rate is determined by lung volume rather than by intrathoracic pressure.[7] Maximum flow rate in the lower portion of the vital capacity is thus "effort independent." The reason for this is as follows: The airways in the lung are supported by the surrounding lung tissue. Airway caliber is set by the tension in the surrounding lung tissue which is a function of lung volume. During exhalation airways narrow and in the normal individual the point of narrowing lies within the intrathoracic airway. The cross section of the airway lumen at this point determines the flow rate of air from the mouth.

Normally, during expiration as lung volume decreases flow rate decreases. If flow rate does not decrease with lung volume the flow limiting segment is outside the thorax, or the lumen at the flow limiting point is fixed, or the lung tissue is destroyed. Examples of each type of

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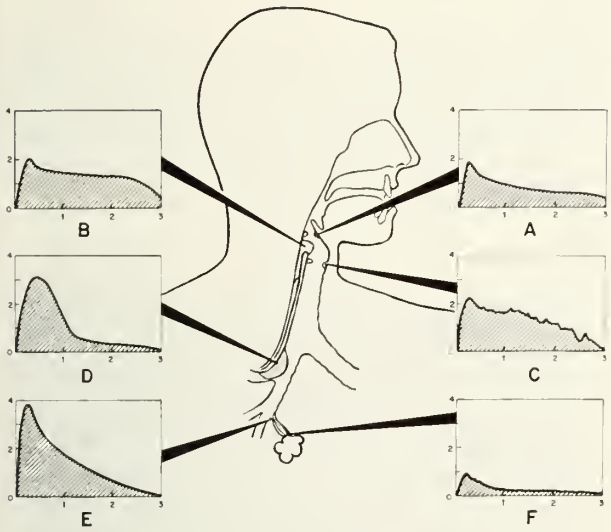


FIG. 2. – FLOW VOLUME CURVE IN LOCALIZED AIRWAY OBSTRUCTION.

Panel A: The flow volume curve from a 57-year-old smoker with a squamous cell carcinoma of the glottis producing an annular constriction.

Panel B: A squamous cell carcinoma of the esophagus invaginating the posterior tracheal membrane in a 64-year-old smoker.

Panel C: Vocal cord paralysis in a 58-year-old man following radiation of a bronchogenic carcinoma and paralysis of the recurrent laryngeal nerve.

Panel D: Partial occlusion of the right main stem bronchus in a 69-year-old smoker.

Panel E: Moderately severe bronchial asthma in remission in a 22-year-old white female.

Panel F: Emphysema without underlying bronchitis in a 65-year-old man.

In each panel flow rate is plotted on the ordinate in liters per second. Lung volume is plotted on the abscissa in liters. Peak lung inflation is at the zero point. In extrathoracic obstruction (Panels A and B) flow rate is fixed by the cross sectional area of the obstructed segment. In intrathoracic obstruction (Panel E) flow rate decreases with decreasing lung volume.

lung volume independent flow rate will be presented and compared to disease states in which flow rate is dependent upon lung volume.

Two cases of fixed caliber airway obstruction outside the thorax (Panel A, B – Fig. 2) demonstrate the "plateau" phenomenon characteristic of flow through a constant bore extrathoracic resistance. In A, the glottis is occluded by carcinoma. In B, the posterior membranous trachea has been compressed by esophageal carcinoma. In the middle two-thirds of the vital capacity maneuver flow rate is unchanged by lung volume. In other words, the caliber of the lumen at the point of obstruction is not dependent upon lung volume but is rather fixed and extrathoracic in position.

In pan-lobular emphysema (Panel F, Fig. 2) the flow rate is also independent of lung volume but for an entirely different reason. In this situation the lung tissue is destroyed and there is lack of airway support. During expiration intrathoracic airways are compressed. This compression throttles flow and gives rise to a flattened flow volume curve. Again, as in the case of the extrathoracic obstruction, flow rate is virtually the same at all mid-lung volumes.

In acute bronchial asthma airway diameter and expiratory airflow rate are dependent upon lung volume (Panel E, Fig. 2). The caliber of the flow limiting segment within the airway decreases during exhalation. Expiratory flow rate falls in a smooth curve from peak flow to the forced expiratory position. This observation is consistent with the notion that in asthma the lung tissue supporting the airways, although hyper-inflated, is still elastic. The airways are occluded by mucus and the airway walls are thickened by muscular hypertrophy and edema. Despite this, the tension within the elastic pulmonary parenchyma determines the expiratory flow pattern as in a normal individual. In comparing asthma and emphysema, the nature of the obstruction seems to be very different. In asthma, the functional elasticity of the lung has been reversibly compromised whereas in emphysema the elastic mesh has been destroyed.

Paralysis of the vocal cords and obstruction of the airway at the level of the larynx produces a flow volume curve pattern containing elements of fixed and "lung volume dependent" obstruction (Panel C, Fig. 2). As the larynx and trachea change caliber during respiration the lumen of the airway at this point varies much the same as intrathoracic airways do. However, the change is not as great as it is within the lung. Thus, the flow volume curve is not truly plateau but falls gently to the forced expiratory position.

With partial occlusion of the right main stem bronchus by carcinoma (Panel D, Fig. 2) air exits rapidly from the left lung during a forced expiration accounting for a sharp rise to peak flow rate. Thereafter, air leaking past the tumor from the right lung produces a low sloping curve from a point approximately 1.2 liters after the beginning of expiration to the forced expiratory position. Even though the airway itself is infiltrated and partially obstructed by tumor, flow rate is not fixed but falls away gently to the forced expiratory position. This suggests that the cross sectional area of the airway at the site of the tumor changes with changing lung volume.

DISCUSSION

This study deals with the relationship of expiratory airflow rate and lung volume in airway obstruction at the level of the glottis, larynx, trachea, main stem bronchus and lower intrathoracic airway. The data are consistent with the idea that 1) expiratory flow rate is determined by a flow-limiting segment in the airway, 2) if this segment is intrathoracic in position and the lung tissue is anatomically and physiologically intact, flow will be dependent upon lung volume, 3) if the obstruction is extrathoracic and fixed, flow is limited by the cross sectional area of the obstructed segment and is independent of lung volume, 4) when lung parenchyma is destroyed in emphysema, flow rate is no longer depen-

dent upon lung volume because tension on the airway walls is relaxed and the airways themselves are weak-walled and flail, 5) in asthma, expiratory flow rate is highly dependent upon lung volume even though the airways are thickened with muscular hypertrophy and edema.

The primary pathologic process in acute bronchial asthma is airway narrowing with hyper-inflated but essentially normal surrounding lung parenchyma. In emphysema, airway walls may be weakened but more important the surrounding lung tissue has lost its normal elasticity because of destruction of alveolar septa. Thus, in some cases of asthma, particularly those studied during remission, the character of the flow volume curve may give encouraging information about the nature of the pulmonary elastic mesh and the reversibility of the airway obstruction. In acute bronchial asthma such a differentiation is not possible. This finding is corroborated by the physiologic evidence of Mellins and Lord[8] that expiratory flow rate may be maintained with intrathoracic driving pressure in excess of 30 cm of water in acute bronchial asthma, whereas, in emphysema pressures of 10 to 15 cm of water occlude intrathoracic airways. This suggests that the airways in patients with asthma are less likely to collapse under high intrathoracic pressure than are the airways of patients with emphysema.

There are several advantages of the flow volume curve as compared to the standard spirogram for the determination and characterization of flow abnormalities in patients with lung disease. Lack of patient effort is readily apparent. The degree of airway obstruction correlates well with the shape of the curve. The present study suggests that in certain types of obstruction the flow volume curve will give useful information about the location and reversibility of the occlusion.

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Chain Of Events Link Food To Migraine

A chain of events, initiated by the ingestion of certain foods, may produce migraine headaches, according to Edda Hanington, M.D., of London's Elizabeth Garrett Anderson Hospital, and physiologist A. Murray Harper of the University of Glasgow. They suggest that when a person eats a food which is rich in an enzyme known as tyramine, such as cheddar cheese, the following chain of events is triggered: Tyramine releases the hormone norepinephrine from tissue stores within the brain, which causes the blood vessels of the brain and scalp to constrict. At this point, the visual disturbances marking the onset of migraine appear. When the supply of norepinephrine is exhausted, the scalp vessels rebound from the constriction by dilating, which causes the intense head pain. The headache finally ceases when the tissue stores of norepinephrine have been replenished.

In one experiment, the investigators excluded certain headache-producing foods from the diets of 17 migraine patients. Every one of these patients developed a headache at least once after taking an oral dose of tyramine equivalent to the amount found in 3½ ounces of ripe cheddar cheese. Migraine developed 40 out of 49 times after the patients took tyramine capsules. But when they took capsules containing sugar, the attacks occurred only twice in 26 times.

Citing other evidence linking norepinephrine and migraine, Drs. Hanington and Harper note that reserpine, a well-known inducer of migraine, causes release of the hormone. A breakdown product of norepinephrine is found in greater amounts in the urine during a migraine attack. Fear, anger, stress, and hunger—which have been linked to migraine—also may start the norepinephrine flowing. ("How Foods Give Entree to Migraine," in *Medical World News,* July 12, 1968) — AMA Health Education Service for Schools and Colleges, Vol. 8, No. 10, Dec. 1968.

Special Article

The Revolution in Health Care

FREDERICK T. HILL, M.D.
Past President
Maine Medical Association

It is doubtful if any of the fourteen people from Maine, who attended the recent "Secretary's Regional Conference on Health Care Costs" in Boston, came away with any clear conception of what was accomplished. It seems unfortunate that in a Country blessed with all of the advantages that we have in these United States, we could not arrive at proper decisions in a spirit of understanding, mutual respect, and willingness to cooperate. I have heard it said that to accomplish this would require a miracle. Actually we are living in a Revolutionary Era.

The previous four or five decades have produced great changes in health and hospital facilities throughout the Country. The great scientific and technical advances of this period have provided us with the skills and techniques to control and cure many conditions, undreamed of years ago. It has also given us problems. Coggeshall has stated, that because of these technical advances, "we have traded Mortality for Morbidity, and must now cope with the infirmities of old age," as more people are living to present us with the problems of the aged. This might be termed the Scientific Revolution.

Then, with all of the best intentions in the World, we became faced with the impact of Title XIX, Medicare, and then Public Laws 89-749 and 89-239, holding out the promise of better care for all people, no matter what their condition, situation, or geographic location. This indeed was commendable and might be termed the Social Revolution.

Inevitably this brought up the question of how it was to be done and how it could be paid for. This might be termed the Economic Revolution. With an estimated deficit of over 275,000 workers in the health field, doctors, nurses, all paramedical personnel, technicians, social workers, engineers, etc. this is, indeed, a problem. It has been estimated that the number of physicians must be doubled, paramedical personnel quadrupled, and 1,000,000 more hospital beds provided, all within the next generation.

Admittedly a beginning has been made but needed personnel cannot be provided overnight, and with the inevitable competition, we may see pirating of personnel, just as flagrant as in the business world. More and more nursing and paramedical personnel are demanding higher wages, so this Economic Revolution poses problems of its own. It behooves all of us, in every hospital that has the facilities, to provide teaching and training programs for personnel, not merely for its own use, but aimed at providing those needed for the geographic area to be served.

Facilities must be used to the best advantage of the entire area. So-called satellite hospitals or community health centers must be set up. Adequate ambulance services to the regional hospital center should be provided. Above all we must have better area-wide planning and less unnecessary duplication of facilities in any given area.

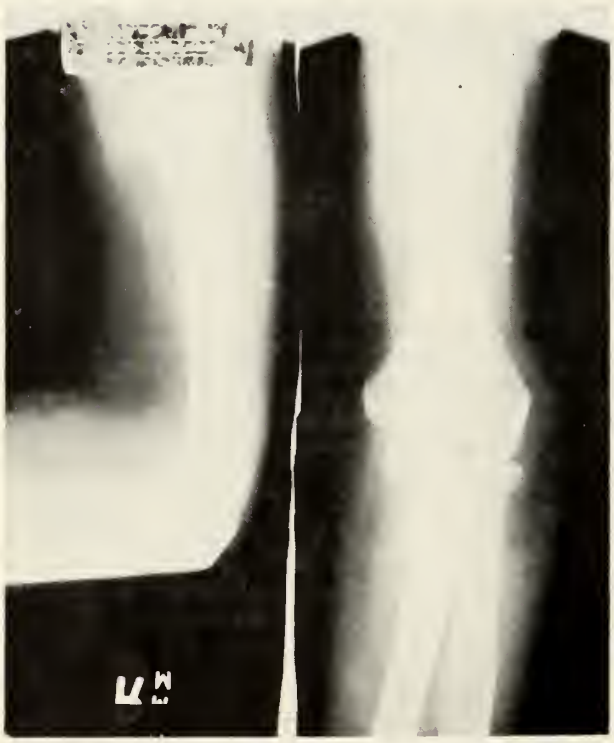
Any visit to the average regional center hospital on a Saturday or Sunday reveals wasted facilities. One may find the institution completely inactive except for the patient floors and the basic dietary and housekeeping facilities with the exception, of course, of the ever present so-called emergency service. A seven day week with all services carrying on throughout the period would seem ideal. But could one get the necessary personnel? Probably not for some time.

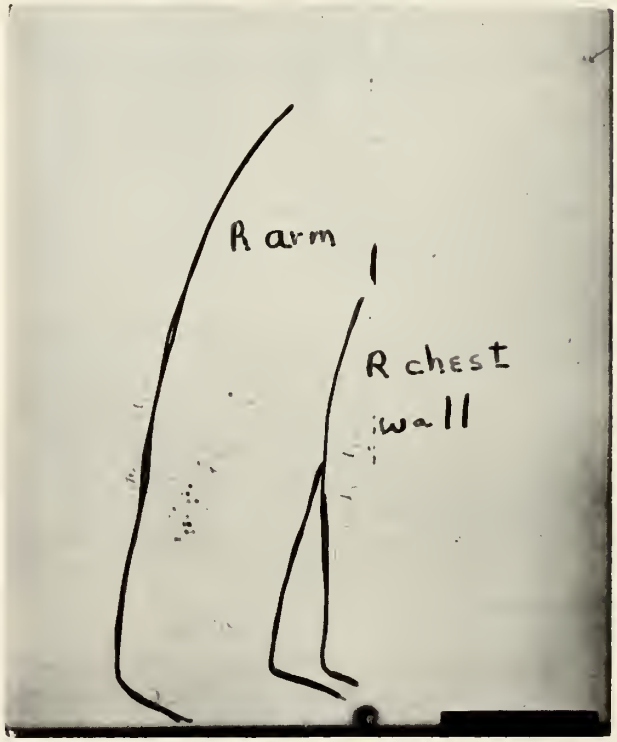
So now we are in the final revolution, a Political one in which the Federal authorities may take over by default and determine what our future is to be. This latter course, the Political Revolution, is fraught with many dangers, not the least of which is the complete neglect of patients as people, people who should be given kind, thoughtful, personal care in a friendly environment. I would hope this personal quality could be preserved because it has great therapeutic value.

All of this should not require any miracle but cooperation on the part of all in the health field.

X-Ray of the Month – No. 1*

This 70-year-old white male had a diagnosis of prostatic carcinoma made in October of 1967. He is admitted for evaluation of right arm and left hip pain. Presented for your interpretation are a radiograph of the right humerus and a strontium – 85 (^{85} Sr) scan of the same area.





Metastatic Carcinoma of Prostate

It is not uncommon to have a positive bone scan in the face of a negative roentgenogram of a patient with skeletal metastases. Simpson and Orange have used autoradiography to demonstrate^{85} Sr deposition in metastatic lesions where new bone is being formed. Briggs and others have shown that in patients with positive bone scans 62% showed new or additional information not available on the roentgenograms.

This patient had severe bone pain, but a negative roentgenogram and positive^{85} Sr bone scan. He was then treated with 14 mc (millicuries) of ^{32} P according to the method of Parsons. It has been shown by Parsons, Donati, Maxfield and others that such patients as these will show a gratifying improvement with relief of pain for an average period of 6 months. The patient presented this month was free of pain 3 days following the institution of ^{32} P therapy.

*From the Department of Radiology, Maine Medical Center, Portland, Maine 04102.

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The Journal of the Maine Medical Association

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Across The Desk

Hill-Burton Hospital Construction Program

(CHICAGO) — Hill-Burton Hospital Construction Program is going to require that all state planning agencies stipulate a minimum number of beds per hospital for each state, says Harald M. Graning, M.D., director, Division of Hospital and Medical Facilities, U. S. Public Health Service. Graning told the Institute for Areawide Health Planning Agency Executives at the University of Chicago that the minimum requirement will vary from state to state. Graning also said Hill-Burton will allow hospitals to build "motel like" accommodations for patients needing diagnostic studies and physician examining rooms to encourage community residents to come to the hospital for care. — *The Blue Cross Digest.*

Rubella Vaccination Plans Spark Debate Over Financing

An insight into a continuing problem surrounding the Comprehensive Health Planning and Services Act is provided by a current intramural HEW debate revolving around the new rubella vaccine. The vaccine is almost sure to be approved for marketing about mid-1969. The next major rubella epidemic has been forecast for 1970. A mass program to vaccinate school children next fall could blunt the epidemic and the tragedy of birth defects that likely would result from transmittal of the disease to pregnant women.

The question is how HEW would finance a mass vaccination. One proposal is to rehabilitate the Vaccination Assistance Act, which HEW has let lapse, and reserve funds in the 1970 budget for the rubella program. There already is much sentiment for revival of the act, which Sen. Edward M. Kennedy (D-Mass.) may reintroduce next year.

Those on the other side of the debate say the mass vaccination should be financed through Project E grants of the Comprehensive Health Planning and Services Act. When the vaccine is ready, a quick supplemental appropriations bill could provide the funds. To do otherwise, the argument goes, would harm the attempt to phase out categorical disease grant programs. This is the side that appears to be prevailing at this point, but the argument is far from over. – *Washington Report on Medicine & Health,* Nov. 4, 1968, No. 1114.

HEW Regional Officers Criticized By Several State Health Officers

Keep your eye on growing opposition among public health people to HEW's regional offices. Complaints are mounting that they are more a hindrance than a help. The Governing Council of the Association of State and Territorial Health Officers (ASTHO) is expected to take a hard look at the regional operations and may eventually come out openly for their abolition. Chief gripe is that the six regional headquarters serve both as promoter of grants and judge of grant applications. This is an impossible dual role, the complainants say. *The opposition comes at a time when HEW is considering enlarging the regional operations.*

Meantime, ASTHO has joined the chorus of health groups asking for a separate department of health in the Executive Branch. ASTHO's Board of Governors passed a resolution at its Washington meeting last week asking that "all non-military-related health services and programs" be gathered into one department. Presumably this leaves out the Veterans Administration. ASTHO also asked that Children's Bureau health services be included in the Government's health organization, be it PHS or a department of health, and at a "higher level" than present. – *Washington Report on Medicine & Health,* Dec. 16, 1968, No. 1120.

Maine Heart Association Notes

20 Winter Street, Augusta, Maine

Detection of Heart Disease in Children

Since 1915, the need for screening school children to detect heart disease has been recognized. . . .

The need for heart disease screening in school children must be evaluated in relation to the standard of medical care in the community and the ability of medical resources to provide adequate diagnostic and therapeutic services for care of individuals identified by the screen mechanism. Benefits . . . exist in three areas: 1) Identification of previously undetected cases of heart disease allows these patients to receive medical and surgical care at the most appropriate time. 2) Children with previously recognized heart disease who may have strayed from medical care are identified, ... and therapeutic measures may be reinstituted. 3) The screen mechanism may be so designed as to identify children who carry a false diagnosis of heart disease. . . . The number of such children "delabeled" by some programs has equalled or surpassed the number of children with previously undetected organic heart disease identified by the same programs.

. . . for the purpose of obtaining a maximum yield of previously unknown heart disease with a minimum expenditure of physician time and public health dollars, the analog-digital device screening technique is the best technique that is currently available. . . .

It should be stressed that any type of screening program for school age children must be a community effort. Mere identification of cases is of no benefit if adequate diagnostic and therapeutic follow-up is not ensured. Development of cardiac . . . screening programs must be accompanied by expansion of community medical resources to provide the necessary follow-up services. . . .

Other heart disease detection techniques such as computer analysis of the oscillographic phonocardiogram, contour plot spectral phonocardiography, computer analysis of the electrocardiogram, echocardiography, and sphygmorecording are currently being developed and evaluated. Testing of their application to mass screening should be anticipated in the near future as logical extensions of the "experiment" begun . . . in 1919.

Submitted by Jacob B. Dana, M.D. President, Maine Heart Association.

Reference: Henikoff, L.M., et al, Circulation, Vol. 38, pages 375-385, 1968.



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Nine-Point Action Program On Health Hazards Of Cigarette Smoking

NEW YORK, N.Y. — With stress on convincing people "that giving up cigarette smoking is immediately rewarding and offers a more pleasurable and longer life," the American Cancer Society recently adopted a new and comprehensive nine-point action program on the health hazards of cigarette smoking.

The program was adopted by the National Board of the Society meeting in connection with its Annual Meeting in the Waldorf-Astoria Hotel.

The Society emphasized the great changes in attitudes towards cigarette smoking since 1960 and said: "While medical research has produced a clear picture of the threat of cigarettes, their social acceptability and the energy with which they are promoted have not been essentially reduced."

The leaders of the Society, assembled from all 50 states, cited adult example, peer invitation and glamorous advertising as factors enticing youngsters to start cigarette smoking. While believing in freedom of choice for adults on whether to smoke, the Society declared, "We do not see enough real freedom on this decision in our cigarette infiltrated world." Despite this the statement noted that there were 21 million ex-cigarette smokers and that "about one in five men who once smoked cigarettes has given up the habit. . . ."

While stressing the Society's aim of persuading people not to smoke, the statement said, "those who cannot stop smoking should be encouraged to select low tar and nicotine cigarettes or to switch without inhaling to pipes or standard cigars." The Society said, "Prevention of the disease is the American Cancer Society's main hope and to achieve this public attitudes and individual behavior must be drastically altered."

Declaring bluntly that possibilities of cure of lung cancer remain limited, the statement outlined the following nine-point program:

One: Division and Units of the ACS will make special efforts to involve more practicing physicians — the most important health educators — in local activities and to persuade their patients not to smoke cigarettes.

Two: Community activities will emphasize "face-to-face efforts to influence individuals" and support will be given to organized cigarette withdrawal programs.

Three: ACS will continue to stress educational programs in elementary and high schools but calls for "a careful evaluation of results and a study of teaching techniques and materials. . . ."

Four: The media information programs will be stepped up and while warning of the risks of cigarette smoking they will play up the immediate rewards of giving up the habit.

Five: The Society will seek acceptance by all broadcasters of the Federal Communications Commission ruling that the Fairness Doctrine covers cigarette advertising.

Six: The Society will promote programs in business and industrial firms since absenteeism is considerably higher among cigarette smokers than non smokers; it will also urge insurance companies to offer reductions in premiums to non-cigarette smoking policy holders.

Seven: Research into the mechanism by which smoking injures the body and into problems of addiction and dependence will be continued as well as the possibility of developing less hazardous cigarettes and also research into the most effective ways of persuading people not to smoke.

Eight: The Society will provide expert testimony before congressional committees especially in support of measures to make the warning label on cigarette smoking more accurate and to extend it to all cigarette advertising; it will also seek legislation requiring the industry to list tar and nicotine content on cigarette packages.

Nine: The ACS will "strive to secure the elimination of cigarette advertising in all media" and the hope is expressed "that this can be achieved by voluntary self-regulation and that governmental action will not be necessary."

American Cancer Society News Service Release

A REPORT ON THE BALANCED RETIREMENT PROGRAM OF THE COUNCIL OF THE NEW ENGLAND STATE MEDICAL SOCIETIES

The following report was prepared by Mr. William D. Brownlie, Servicing Administrator of the New England State Medical Society Balanced Retirement Program, and Registered Principal of the Beacon Investing Corporation.

More than 1,000 physicians in the six New England states are using this program for their Keogh Plan, and there are over 2,200 physicians investing in Beacon Investing Corporation, either in or outside of Keogh.

There have been some recent changes regarding the Beacon Fund's investment policy.

The securities bought and sold during the past year reflect a shift of emphasis in policy. A larger proportion of investable funds have been placed in securities of companies of medium size and with strong growth potential, while still giving due consideration to the risk factor. Also, the average size of individual commitments in such equities has been increased. Naturally, where the potential is good, better quality securities have not and will not be overlooked.

The new policy was brought about because within the overall program there are other ingredients for the physician to seek more conservative investments (flexible retirement fixed annuity with its stop and go feature issued by New England Life). It was therefore felt that the Fund should put more emphasis on capital gains and appreciation rather than income.

Beacon's past performance, when compared to funds of a similar objective – mutual funds where the objective was an income as well as capital appreciation, and when compared with funds of a similar size, has been up to the standard of the industry. The annual compounded growth rate of the fund, since its inception, has been approximately 9%.

$1,000 invested in Beacon Investing Corporation on June 11, 1962, rose to $1,572 as of September 10, 1968. Assuming capital gains distribution were accepted in additional shares, the cumulative value of the capital gains distribution, amounting to $73, brings the total up to $1,645. In addition, a total of $135 has been paid in the form of dividends from investment income on this accumulative investment.

Like all mutual funds, when the fund buys and sells securities these must be executed through a brokerage firm. To secure additional benefits to the fund from the placement of brokerage business, the Board of Directors of Beacon Investing Corporation have decided that those brokerage firms that meet the requirements as stated below will be rewarded with appropriate brokerage business.

A. One of the principal benefits to the fund through the facilities of a large brokerage house is the execution of orders for substantial blocks of stock with a relatively thin market can result in better executed orders.

B. The ability, through its large research facilities and its underwriting operations, to bring to the attention of the Investment Advisor, from time-to-time, investment situations that in their opinion might be worthy of consideration for Beacon Investing Corporation.

It should be kept in proper focus that Standard & Poor is, and will remain, the Investment Adviser for the Fund.

The size of Beacon Investing Corporation which is roughly a little over 10 million dollars is such to allow the fund to be extremely flexible in its choice of securities and to be able to be involved with medium-sized companies with hopefully growth potential.

Because of its no-load feature and its past performance when compared to its stated objective, the shift in emphasis in investment policy and designation of a principal broker for the reasons above mentioned, it would appear that each and every physician in the six states would do well to take a hard look at the Beacon Fund as a possible investment, whether in Keogh or outside of Keogh.

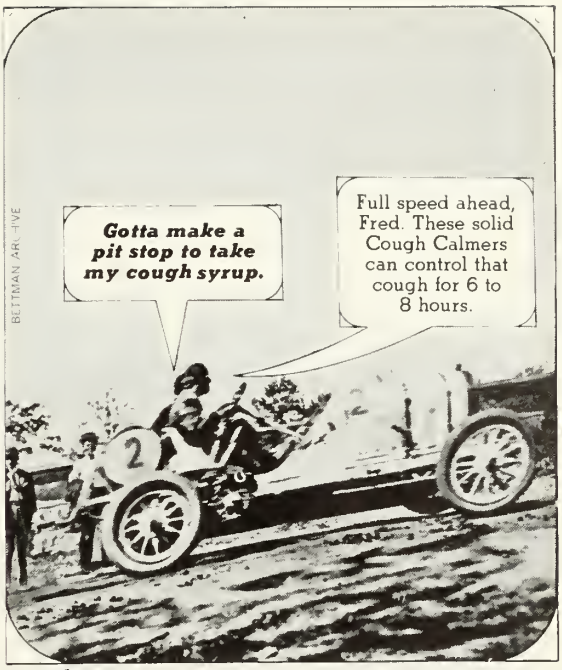
Due to the many inquiries and strong interest on the part of many physicians, I want to bring you up to date on the status of the Variable Annuity as far as New England Life is concerned. New England Life will issue an individual variable annuity in mid-1969, and arrangements have already been made to allow all participants in this program to transfer the money from the fixed annuity to the variable annuity, 100¢ on the dollar. This statement by New England Life is only to indicate to you their position regarding the variable annuity. This is not to be considered an offering of a variable annuity as that can only be done by prospectus.

(For additional information on the New England Physicians Balanced Retirement Program, write to Mr. William D. Brownlie, Servicing Administrator, 10 Post Office Square, Boston, Massachusetts 02109, or call him at 542-2650.)

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County Society Notes

LINCOLN-SAGADAHOC

A meeting of the Lincoln-Sagadahoc County Medical Society was held at The Ledges in Wiscasset, Maine on November 19, 1968.

The meeting was called to order by the President, Mary J. Tracy, M.D.

Charles E. Burden, M.D. reported that the voters of Bath had approved fluoridation.

Dr. Tracy introduced Dr. James Smith to the membership.

Francis A. Winchenbach, M.D. reported that 100% of "Usual and Reasonable Fees" have been negotiated for national insurance plans, and that local committees will be needed to oversee fee problems.

Alan W. Zeller, M.D. announced that Frank O. Avantaggio, Jr., M.D. has now been certified by the American Board of Surgery.

Arkadij Oceretko, M.D. introduced Carl R. Griffin, Jr., M.D. who read a CPC protocol and discussed it.

GEORGE W. BOSTWICK, M.D., *Secretary*

KENNEBEC

The Kennebec County Medical Association met on October 17, 1968 at the Executive Motor Inn, in Waterville, Maine. Following a social hour and dinner, the business meeting was convened by the President, Richard H. Dennis, M.D.

Dr. Dennis appointed a Committee, consisting of the following members, to cooperate with the American Association of Medical Assistants: Drs. Richard H. Dennis (1 yr.), George R. Landwehr (2 yrs.) and Irving I. Goodof (3 yrs.). The Secretary was directed to convey this information to Mrs. Arlene Low, Secretary of the Maine Chapter of the American Association of Medical Assistants.

Dr. Dennis requested that M. Tieche Shelton, M.D. prepare a resolution on the death of fellow member, Samuel H. Kagan, M.D., to be presented at the annual meeting of the Association in December.

Drs. Raymond E. Culver of Waterville and Stella L. Uldall of Augusta were elected to membership.

Following the business meeting the scientific program was presented by David A. Ogden, M.D., Chief, Renal Section, Denver VA Hospital and a member of the Renal Transplant Team of the University of Colorado. Dr. Ogden reviewed the philosophy involved in renal transplantation efforts and conveyed to the group a concise picture of the nation's presently available renal dialysis, as well as organ transplant facilities. He also outlined a review of preparation of patients for renal dialysis and transplantation and imparted valuable suggestions on the general management of chronic renal failure. Dr. Ogden illustrated the important gains in renal transplant success made possible by advances in immunotherapy and control of infection and closed his lecture with a fascinating discussion of a patient who had received both a cardiac and a kidney transplant.

In reviewing the Socio-Economic factors, as well as the medical problems involved in renal dialysis and renal transplant work, Dr. Ogden pointed out that so far our society has provided such care for only about 10% in need of the service and considered to be suitable candidates. There are some 600 dialysis slots active in the nation, and only 10% of these become available each year in addition to any new facilities constructed. At the present time, there are some 20 chronic dialysis units in the Veterans Administration system and the VA has approximately 50% of the dialysis slots in the nation. The importance of developments in the area of tissue typing compatibility were emphasized. Dialysis and transplant centers can accept any suitable candidate for renal transplantation most easily if the patient has a living compatible organ donor. If there is not a living donor, most centers can accept only patients from their local area who would then have to be kept on dialysis until a kidney became available from a non-living donor.

Dr. Ogden's talk was accompanied by excellent and informative slides and was followed by a most informative question and answer period.

FRANCIS A. SPELLMAN, M.D., *Secretary*

CUMBERLAND

The Cumberland County Medical Society met at Valle's Steak House in Portland, Maine on November 21, 1968 with ninty members and guests attending. Following a social hour and dinner, the meeting was called to order by the President, Eugene P. McManamy, M.D.

The program chairman, Ferris S. Ray, M.D., then introduced the speaker of the evening, Dr. John Sigsbee, Chief of Emergency Medical Services at Wesson Memorial Hospital in Springfield, Massachusetts.

Dr. Sigsbee's topic was "The Emergency Ward Crisis." He indicated that Wesson Memorial had been confronted some years ago with the common problem of diminishing physician availability for coverage of the Emergency Ward. While closing the Emergency Ward was considered, it was not done. Instead, rotation of the medical staff for coverage was carried out but did not prove to be a satisfactory answer. Approximately six years ago, Dr. Sigsbee and three other physicians contracted with the hospital to provide full-time coverage of the Emergency Ward. This has been so successful that the Emergency Ward Staff has grown from the original four to six and will expand to seven physicians as of the first of next year.

As a result of this coverage, even though Wesson Memorial is the smallest hospital in Springfield, the Emergency service is the city's largest. This type of practice has been rewarding both professionally and financially for the physicians involved, it has obviously proven to be a great service for the public, it has been a boon to the hospital, and it has been accepted by and helpful to the other physicians in the community.

Dr. Sigsbee touched upon numerous specific problems confronting his group both in the past and at the present time. He predicted that medicine in the future will become progressively more hospital oriented and that practice similar to that in which he is engaged will be expanded to provide service to more and more patients in various parts of the hospital.

Following Dr. Sigsbee's timely presentation, he answered many questions.

STANLEY B. SYLVESTER, M.D., *Secretary*

ANDROSCOGGIN

A meeting of the Androscoggin County Medical Association was held at the Central Maine General Hospital in Lewiston, Maine on November 21, 1968 with twenty-four members present.

The meeting was called to order by the President, Joseph J. Rando, M.D.

Paul H. Cummings, M.D. of Lewiston was elected to membership.

Charles W. Steele, M.D. reported on the business meeting of Blue Shield.

John W. Carrier, M.D. of Lewiston presented movies on Cardiac Revascularization. Comments were made by Drs. Louis N. Fishman and Charles W. Steele.

Dr. Carrier introduced Al Nadeau, president of the Maine Pharmaceutical Association.

DONALD L. ANDERSON, M.D., *Secretary*

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Adverse Reactions: Ethoheptazine and aspirin may cause nausea with or without vomiting and epigastric distress, in a small percentage of patients. Dizziness is rare at recommended dosage. Meprobamate may cause drowsiness, ataxia and rarely allergic or idiosyncratic reactions. These reactions, sometimes severe, can develop in patients receiving only 1 to 4 doses. Such patients may have had no previous contact with meprobamate and may or may not have an allergic history. Mild reactions are characterized by urticarial or erythematous maculopapular rash. Acute nonthrombocytopenic purpura with cutaneous petechiae, ecchymoses, peripheral edema and fever have been reported. If allergic reaction occurs, discontinue meprobamate; do not reinstitute. Severe reactions, observed very rarely, include fever, fainting spells, angioneurotic edema, bronchial spasms, hypotensive crises (1 fatal case), anaphylaxis, stomatitis and proctitis (1 case) and hyperthermia. These cases should be treated symptomatically including, when indicated, such medication as epinephrine, antihistamine and possibly hydrocortisone. A few cases of leukopenia, usually transient, have been reported on continuous use. Rarely, aplastic anemia (1 fatal case), thrombocytopenic purpura, agranulocytosis, and hemolytic anemia have been reported, almost always in presence of known toxic agents.

Overdosage: See precautions section for management of overdosage.

Composition: 150 mg. meprobamate, 75 mg. ethoheptazine citrate and 250 mg. aspirin per tablet.

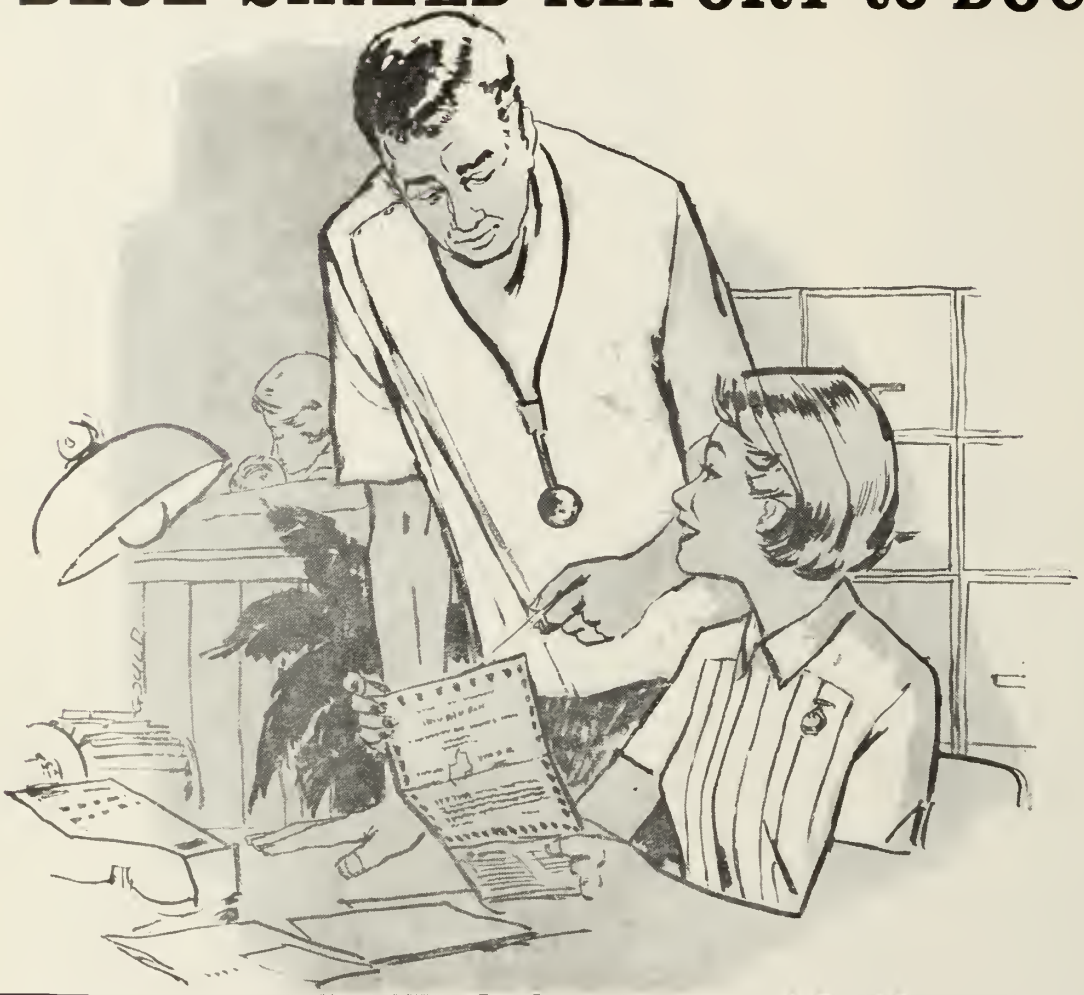
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Precautions: Overgrowth of nonsusceptible organisms may occur. Constant observation is essential. If new infections appear, appropriate measures should be taken. In infants, increased intracranial pressure with bulging fontanels has been observed. All signs and symptoms have disappeared rapidly upon cessation of treatment.

Side Effects: Gastrointestinal system—anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocoli… pruritus ani. Skin—maculopapular and erythematous rashes; a ra… case of exfoliative dermatitis has been reported. Photosensitivit… onycholysis and discoloration of the nails (rare). Kidney—rise in BU… apparently dose-related. Transient increase in urinary output, som… times accompanied by thirst (rare). Hypersensitivity reactions—ur… caria, angioneurotic edema, anaphylaxis. Teeth—dental staining (ye… low-brown) in children of mothers given this drug during the latter ha… of pregnancy, and in children given the drug during the neonatal pe… od, infancy and early childhood. Enamel hypoplasia has been seen … a few children. If adverse reaction or idiosyncrasy occurs, discontin… medication and institute appropriate therapy. Demethylchlortetra… cycline may form a stable calcium complex in any bone-forming tissu… with no serious harmful effects reported thus far in humans.

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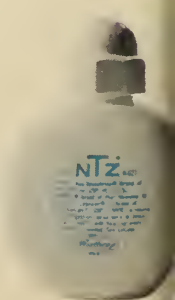
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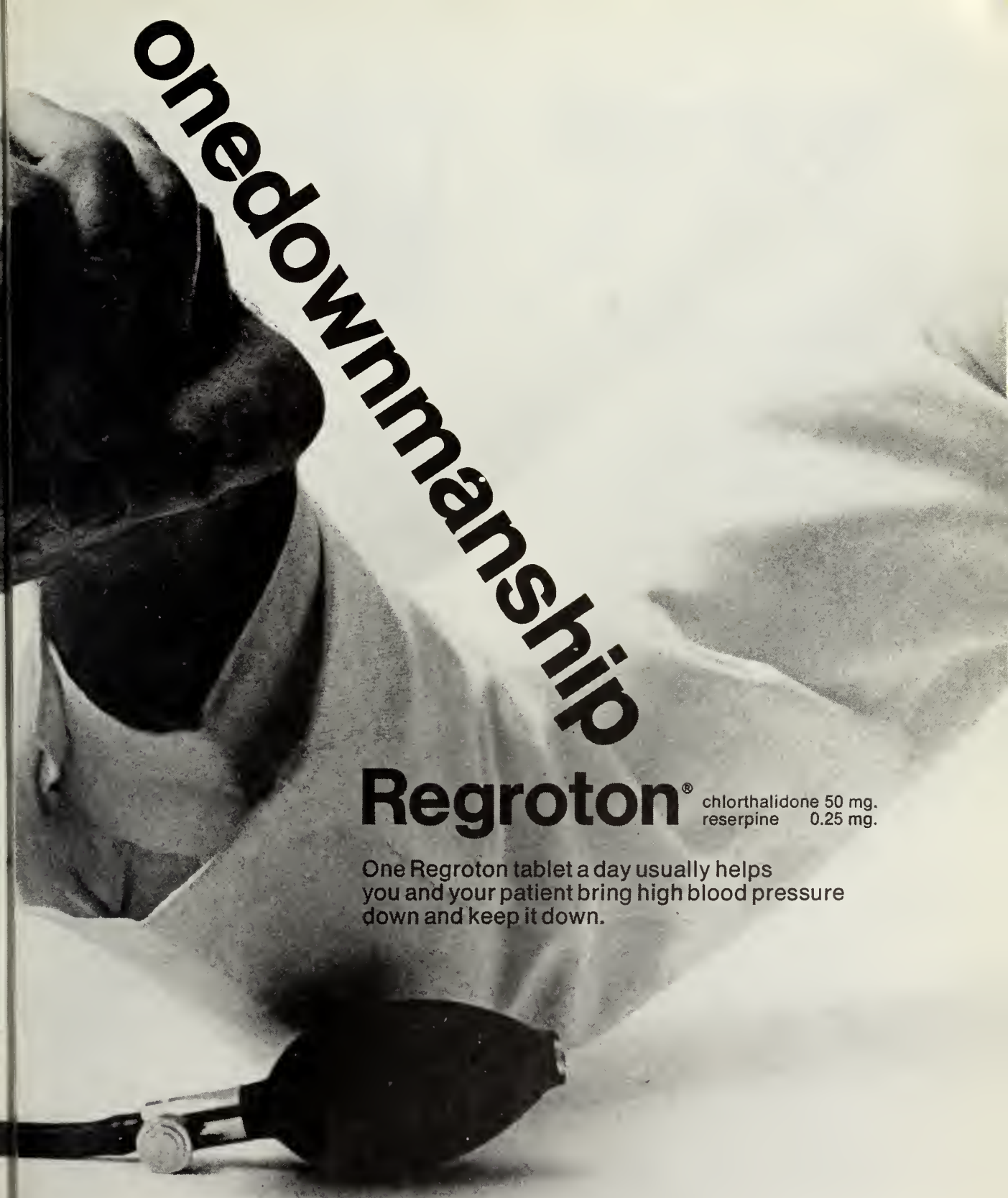
Utterback Private Hospital XI

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Geigy



Regroton®

chlorthalidone 50 mg.
reserpine 0.25 mg.

One Regroton tablet a day usually helps you and your patient bring high blood pressure down and keep it down.

Regroton produces a smooth, long-acting effect that usually reduces both systolic and diastolic pressures. At the same time it often acts to allay anxiety and nervous tension associated with hypertension.

Although Regroton is generally well tolerated, adverse reactions may occur. This drug is contraindicated in mental depression, demonstrated hypersensitivity, and most cases of severe renal or hepatic diseases. For a complete list of side effects, please see the Prescribing Information summarized on the following page.

Regroton®

chlorthalidone 50 mg.
reserpine 0.25 mg.



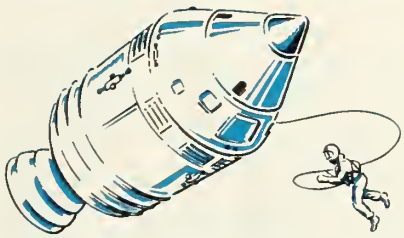
One Regroton tablet a day usually helps you and your patient bring high blood pressure down and keep it down.

Indications: Hypertension. **Contraindications:** History of mental depression, hypersensitivity, and most cases of severe renal or hepatic diseases. **Warning:** With the administration of enteric-coated potassium supplements, which should be used only when adequate dietary supplementation is not practical, the possibility of small-bowel lesions (obstruction, hemorrhage, and perforation) should be kept in mind. Surgery for these lesions has frequently been required and deaths have occurred. Discontinue coated potassium-containing formulations immediately if abdominal pain, distention, nausea, vomiting, or gastrointestinal bleeding occur. Discontinue one week before electroshock therapy, and if depression or peptic ulcer occurs. *Use in pregnancy:* Because chlorthalidone may cross the placental barrier and appear in cord blood and thiazides may appear in breast milk, this drug should be used with care in pregnant patients and nursing mothers. When used in women of childbearing age, the potential benefits of the drug should be weighed against the possible hazards to the fetus. Use of chlorthalidone may result in fetal or neonatal jaundice, thrombocytopenia, and possibly other adverse reactions which have occurred in the adult. Increased respiratory secretions, nasal congestion, cyanosis and anorexia may occur in infants born to reserpine-treated mothers. **Precautions:** Antihypertensive therapy with this drug should always be initiated cautiously in postsympathectomy patients and in patients receiving ganglionic blocking agents, other potent antihypertensive drugs, or curare. Reduce dosage of concomitant antihypertensive agents by at least one-half. To avoid hypotension during surgery, discontinue therapy with this agent two weeks prior to elective surgical procedures. In emergency surgery, use, if needed, anticholinergic or adrenergic drugs or other supportive measures as indicated. Because of the possibility of progression of renal damage, periodic kidney function tests are indicated. Discontinue if the BUN rises or liver dysfunction is aggravated. Hepatic coma may be precipitated. Electrolyte imbalance, sodium and/or potassium depletion may occur. If potassium depletion should occur during therapy, the drug should be discontinued and potassium supplements given, provided the patient does not have marked oliguria. Take particular care in cirrhosis or severe ischemic heart disease and in patients receiving corticosteroids, ACTH, or digitalis. Severe salt restriction is not recommended. Use cautiously in patients with ulcerative colitis or gallstones (biliary colic may be precipitated). Bronchial asthma may occur in susceptible patients. **Adverse Reactions:** The drug is generally well tolerated. The most frequent side effects are nausea, gastric irritation, vomiting, diarrhea, constipation, muscle cramps, headache, dizziness and acute gout. Other potential side effects include angina pectoris, anxiety, depression, bradycardia and ectopic cardiac rhythms (especially when used with digitalis), drowsiness, dull sensorium, hyperglycemia and glycosuria, hyperuricemia, lassitude, restlessness, transient myopia, impotence or dysuria, orthostatic hypotension which may be potentiated when chlorthalidone is combined with alcohol, barbiturates or narcotics, leukopenia, aplastic anemia, skin rashes, thrombocytopenia, agranulocytosis, nasal stuffiness, increased gastric secretions, nightmare, purpura, urticaria, ecchymosis, weakness, uveitis, optic atrophy and glaucoma, and pruritus. Eruptions and/or flushing of the skin, a reversible paralysis agitans-like syndrome, blurred vision, conjunctival injection, increased susceptibility to colds, dyspnea, weight gain, decreased libido, dryness of the mouth, deafness, anorexia, and pancreatitis when epigastric pain or unexplained G.I. symptoms develop after prolonged administration. Jaundice, xanthopsia, paresthesia, photosensitization and necrotizing angiitis are possible. **Average Dosage:** One tablet daily with breakfast. **Availability:** Pink, single-scored tablets in bottles of 100 and 1000.
(B)46-600-C

For details, please see complete prescribing information.

Geigy Pharmaceuticals
Division of
Geigy Chemical Corporation
Ardsley, New York 10502

RE-6225



Man in space, now fait accompli, re-emphasizes the importance of Uro-Phosphate therapy. Research into the effect of space travel on the astronaut reveals that weightlessness causes loss of bone calcium. As the bones are required to bear less and less of the weight of the body they lose calcium, increasing the calcium content of the urine. When physical activity is reduced, the acidity of the urine should be adjusted to keep increased calcium in solution . . . . a prophylaxis to prevent kidney or bladder calculi.

Uro-Phosphate®

NOW A SUGAR-COATED TABLET

Each tablet contains: METHENAMINE, 300 mg.; SODIUM ACID PHOSPHATE, 500 mg.

Uro-Phosphate gives comfort and protection when inactivity causes discomfort in the urinary function. It keeps calcium in solution, preventing calculi; it maintains clear, acid, sterile urine; it encourages complete voiding and lessens frequency when residual urine is present.

Uro-Phosphate contains sodium acid phosphate, a natural urinary acidifier. This component is fortified with methenamine which is inert until it reaches the acid urinary bladder. In this environment it releases a mild antiseptic keeping the urine sterile.

Uro-Phosphate is safe for continuous use. There are no contra-indications other than acidosis. It can be given in sufficient amount to keep the urine clear, acid and sterile. A heavy sugar coating protects its potency.

Dosage:

For protection of the inactive patient 1 or 2 tablets every 4 to 6 hours is usually sufficient to keep the urine clear, acid and sterile.

2 tablets on retiring will keep residual urine acid and sterile, contributing to comfort and rest.

A clinical supply will be sent to physicians and hospitals on request.

WILLIAM P. POYTHRESS & COMPANY, INC., RICHMOND, VIRGINIA 23217

Manufacturers of Ethical Pharmaceuticals



When the pink pill for U.R.I. symptoms speeds into action, someone somewhere breathes easier.

You provide prompt and continuous relief from symptoms of U.R.I. when you prescribe Novahistine Singlet. Novahistine Singlet is formulated to quickly relieve the fever and the aches and pains that so frequently accompany upper respiratory infections. And these continuous-release tablets provide a vasoconstrictor-antihistamine formulation to shrink swollen membranes and reduce congestion of the turbinates and sinuses.

A total daily dosage of 3 or 4 tablets will normally provide the continuous relief your patient expects. Use with caution in patients with severe hypertension, diabetes mellitus, hyperthyroidism or urinary retention. Caution ambulatory patients that drowsiness may result.

PITMAN-MOORE Division of The Dow Chemical Company, Indianapolis, Indiana

Novahistine®
Singlet decongestant-analgesic

(Each tablet contains: phenylephrine hydrochloride, 40 mg.; chlorpheniramine maleate, 8 mg.; acetaminophen, 500 mg.)

DOW

Whenever anxiety induces or intensifies clinical symptoms

Librium®

(chlordiazepoxide HCl)

Quickly relieves anxiety~Helps improve response in psychophysiologic disorders~Seldom impairs mental acuity or physical coordination,on proper dosage~ Has wide margin of safety

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Indicated when anxiety, tension and apprehension are significant components of the clinical profile.

Contraindications: Patients with known hypersensitivity to the drug.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving).Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards.

Precautions: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (*e.g.*, excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but a also occasionally observed at the lower dosag ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor men strual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dys crasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

Usual Daily Dosage: Individualize for max mum beneficial effects. *Oral*—Adults: Mild and moderate anxiety and tension, 5 or 10 m t.i.d. or q.i.d.; severe states, 20 or 25 mg t.i. or q.i.d. Geriatric patients: 5 mg b.i.d. to q.i.d. (See Precautions.)

Supplied: Librium® (chlordiazepoxide HC Capsules, 5 mg, 10 mg and 25 mg—bottles c 50. Libritabs™ (chlordiazepoxide) Tablets 5 mg, 10 mg and 25 mg—bottles of 100. W respect to clinical activity, capsules and tabl are indistinguishable.

ROCHE

Roche

LABORATORIES
Division of Hoffmann - La Roche Inc.
Nutley, New Jersey 07110

Also available: ***Libritabs***™ *(chlordiazepoxide) 5-mg, 10-mg, 25-mg tabl*

1969 Annual Session
The Samoset, Rockland
June 15, 16, 17

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THE JOURNAL of The Maine Medical Association

THE FRANCIS A. COUNTWAY
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3 MAR 1969

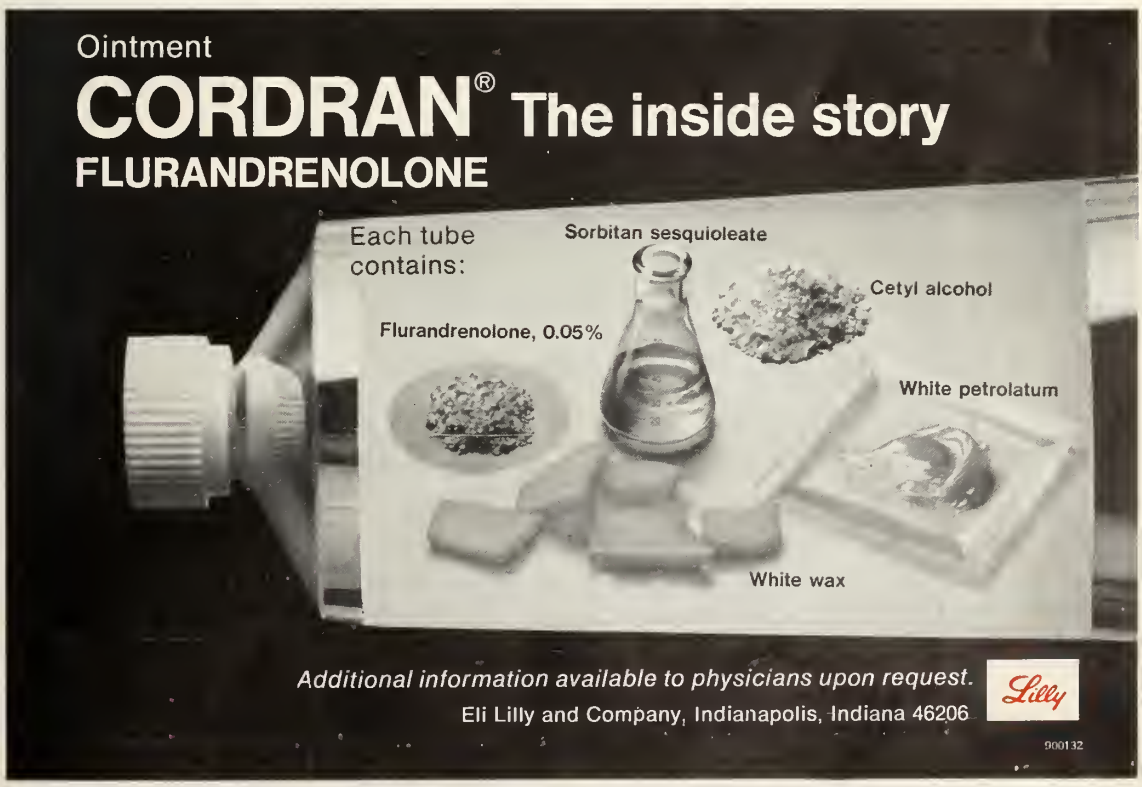
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Ornade®

Prompt relief from nasal congestion and hypersecretion due to colds.

Before prescribing, see complete prescribing information in SK&F literature or *PDR*.
Contraindications: Glaucoma, prostatic hypertrophy, stenosing peptic ulcer, pyloroduodenal or bladder neck obstruction.
Precautions: Use cautiously in the presence of hypertension, hyperthyroidism, coronary artery disease. warn vehicle or machine operators of possible drowsiness
Usage in Pregnancy: Use in pregnancy, nursing mothers and women who might bear children only when potential benefits have been weighed against possible hazards.
Note: The iodine in isopropamide iodide may alter PBI test results and will suppress I^{131} uptake; discontinue 'Ornade' one week before these tests.
Adverse Reactions: Drowsiness; excessive dryness of nose, throat or mouth; nervousness; insomnia. Other known possible adverse reactions of the individual ingredients nausea, vomiting, diarrhea, rash, dizziness, fatigue, tightness of chest, abdominal pain, irritability, tachycardia, headache, incoordination, tremor, difficulty in urination. Thrombocytopenia, leukopenia and convulsions have been reported.
Supplied: Bottles of 50 capsules.

One capsule q12h for round-the-clock relief

Ornade® Spansule® capsules

Trademark. Each capsule contains 8 mg. of Teldrin® (brand of chlorpheniramine maleate), 50 mg. of phenylpropanolamine hydrochloride; 2.5 mg. of isopropamide, as the iodide.

brand of sustained release capsules

Smith Kline & French Laboratories SK&F

THE FRANCIS A. COUNTWAY
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3 MAR 1969

Lutrexin®

HW&D BRAND OF LUTUTRIN

3000 UNIT TABLETS

IN THE TREATMENT OF FUNCTIONAL DYSMENORRHEA AND SELECTED CASES OF PREMATURE LABOR AND 2ND AND 3RD TRIMESTER THREATENED ABORTION

- LUTREXIN, the non-steroid "uterine relaxing factor" has been found to be useful by many clinicians in controlling abnormal uterine activity.
- Literature on indications and dosage available on request.
- No side effects have been reported, even when massive doses (25 tablets per day) were administered.
- Supplied in bottles of twenty-five 3,000 unit tablets.



(In vivo measurement of Lutrexin on contracting uterine muscle of the guinea pig.)

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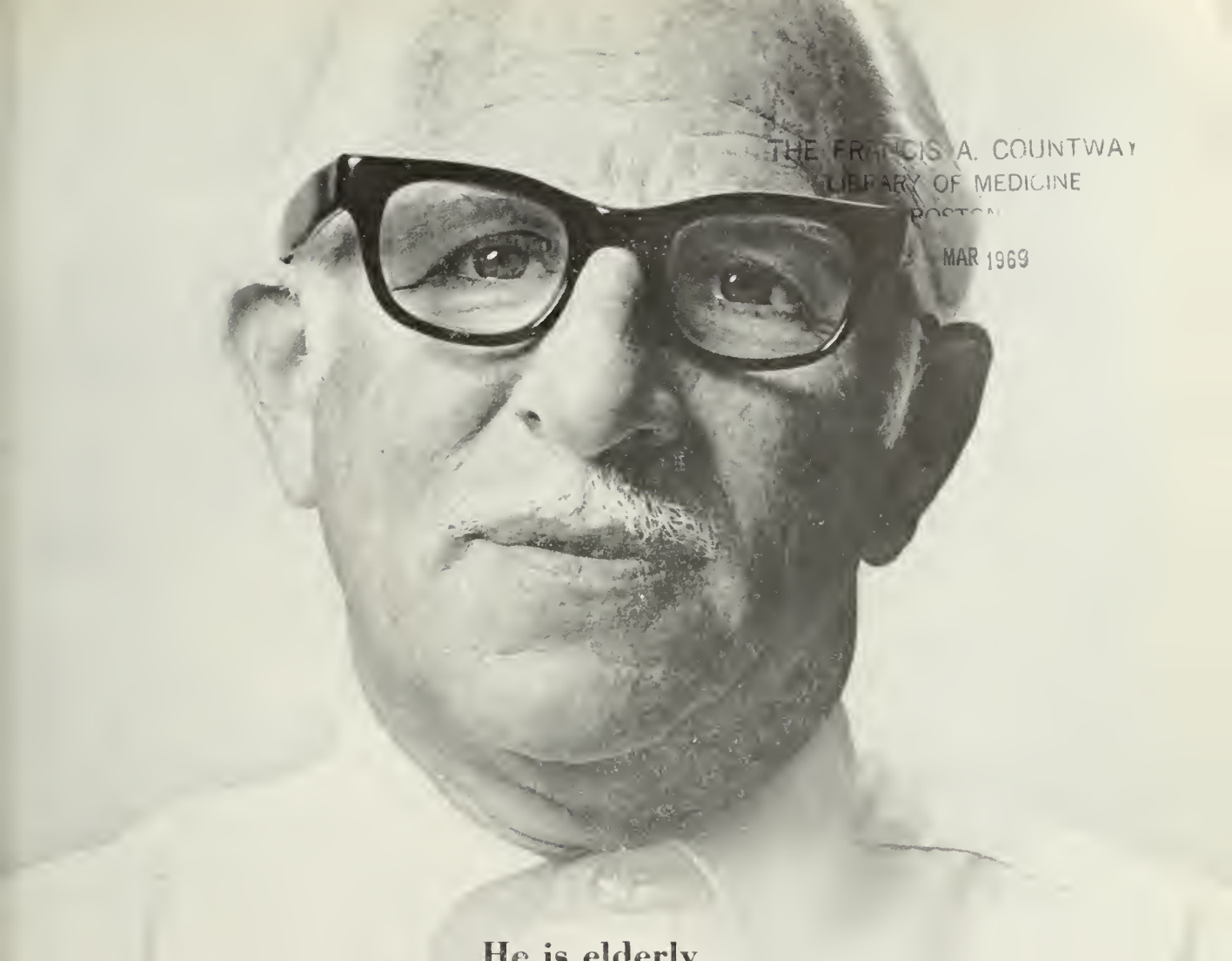
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THE FRANCIS A. COUNTWAY
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BOSTON
MAR 1969

He is elderly.
He is on corticosteroids.
When he needs an antibiotic
he may be a candidate for

DECLOSTATIN® 300

Demethylchlortetracycline HCl 300 mg and Nystatin 500,000 units CAPSULE-SHAPED TABLETS Lederle

b.i.d.

To guard susceptible patients against intestinal monilial overgrowth during broad-spectrum therapy—the protection of nystatin is combined with demethylchlortetracycline in DECLOSTATIN.

For your susceptible candidates, prescribe DECLOSTATIN—the broad-spectrum therapy that prevents monilial overgrowth.

Effectiveness: Because its antibacterial component is DECLOMYCIN Demethylchlortetracycline, DECLOSTATIN should be equally or more effective therapeutically than other tetracyclines in infections caused by tetracycline-sensitive organisms. The antifungal component, Nystatin, protects against superinfection by antibiotic-resistant fungal overgrowth (particularly monilia) in the intestinal tract.

Contraindication: History of hypersensitivity to demethylchlortetracycline or nystatin.

Warning: In renal impairment, usual doses may lead to excessive accumulation and liver toxicity. Under such conditions, lower than usual doses are indicated, and, if therapy is prolonged, serum level determinations may be advisable. A photodynamic reaction to natural or artificial sunlight has been observed. Small amounts of drug and short exposure may produce an exaggerated sunburn reaction which may range from erythema to severe skin manifestations. In a smaller proportion, photoallergic reactions have been reported. Patients should avoid direct exposure to sunlight and discontinue drug at the first evidence of skin discomfort. Necessary subsequent courses of treatment with tetracyclines should be carefully observed.

Precautions: Overgrowth of nonsusceptible organisms may occur. Constant observation is essential. If new infections appear, appropriate measures should be taken. In infants, increased intracranial pressure with bulging fontanels has been observed. All signs and symptoms have disappeared rapidly upon cessation of treatment.

Side Effects: Gastrointestinal system—anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis, pruritus ani. Skin—maculopapular and erythematous rashes; a rare case of exfoliative dermatitis has been reported. Photosensitivity; onycholysis and discoloration of the nails (rare). Kidney—rise in BUN, apparently dose related. Transient increase in urinary output, sometimes accompanied by thirst (rare). Hypersensitivity reactions—urticaria, angioneurotic edema, anaphylaxis. Teeth—dental staining (yellow-brown) in children of mothers given this drug during the latter half of pregnancy, and in children given the drug during the neonatal period, infancy and early childhood. Enamel hypoplasia has been seen in a few children. If adverse reaction or idiosyncrasy occurs, discontinue medication and institute appropriate therapy. Demethylchlortetracycline may form a stable calcium complex in any bone-forming tissue with no serious harmful effects reported thus far in humans.

Average Adult Daily Dosage: 150 mg q.i.d. or 300 mg b.i.d. Should be given 1 hour before or 2 hours after meals, since absorption is impaired by the concomitant administration of high calcium content drugs, foods and some dairy products. Treatment of streptococcal infections should continue for 10 days, even though symptoms have subsided.

Lederle

LEDERLE LABORATORIES
A Division of American Cyanamid Company, Pearl River, New York

The AMBAR SCRAPBOOK of Obesity Oddities
FACT & LEGEND



CONTROL FOOD AND MOOD ALL DAY LONG WITH A SINGLE MORNING DOSE

AMBAR #2 EXTENTABS®

methamphetamine HCl 15 mg., phenobarbital 64.8 mg. (1 gr.) (Warning: may be habit forming).

One Ambar Extentab before breakfast can help control most patients' appetite for up to 12 hours. Methamphetamine, the appetite suppressant, gently elevates mood and helps overcome dieting frustrations. Phenobarbital, the sedative in Ambar, controls irritability and anxiety...helps maintain a state of mental calm and equanimity. Both work together to ease the tensions that erode the willpower during periods of dieting.

Also available: Ambar #1 Extentabs®—methamphetamine hydrochloride 10 mg., phenobarbital 64.8 mg. (1 gr.) (Warning: may be habit forming).

BRIEF SUMMARY/**Indications:** Ambar suppresses appetite and helps offset emotional reactions to dieting. **Contraindications:** Hypersensitivity to barbiturates or sympathomimetics; patients with advanced renal or hepatic disease. **Precautions:** Administer with caution in the presence of cardiovascular disease or hypertension. **Side Effects:** Nervousness or excitement occasionally noted, but usually infrequent at recommended dosages. Slight drowsiness has been reported rarely. See package insert for further details.

A. H. ROBINS COMPANY, RICHMOND, VA. 23220 A-H-ROBINS



"The inconvenience of a cold"

For a cold, NTz® Nasal Spray provides rapid relief of nasal symptoms. Relief starts with the first spray which opens the inferior part of the common meatus. A second spray, a few minutes later, will shrink the turbinates to help provide sinus drainage and ventilation. Dosage may be repeated every three or four hours as needed, for temporary relief of symptoms. NTz is well tolerated but overdosage should be avoided.

As a sinusitis deterrent, NTz Nasal Spray can be used to keep the nasal passages open during a cold to help prevent development of acute sinusitis—or to help prevent the acute condition from becoming chronic.

Supplied: NTz Nasal Spray, plastic squeeze bottles of 20 ml.; NTz Nasal Solution, bottles of 30 ml. (1 fl. oz.) with dropper.

NTz is more than a simple vasoconstrictor. It contains

Neo-Synephrine® (brand of phenylephrine) HCl 0.5 per cent, the major component, virtually synonymous with fast, efficient but gentle nasal vasoconstriction.

Thenfadil® (brand of thenyldiamine) HCl 0.1 per cent, topical antihistamine for reduction of rhinorrhea, sneezing or itching. It combats the allergic reactions that may occur in colds or sinusitis.

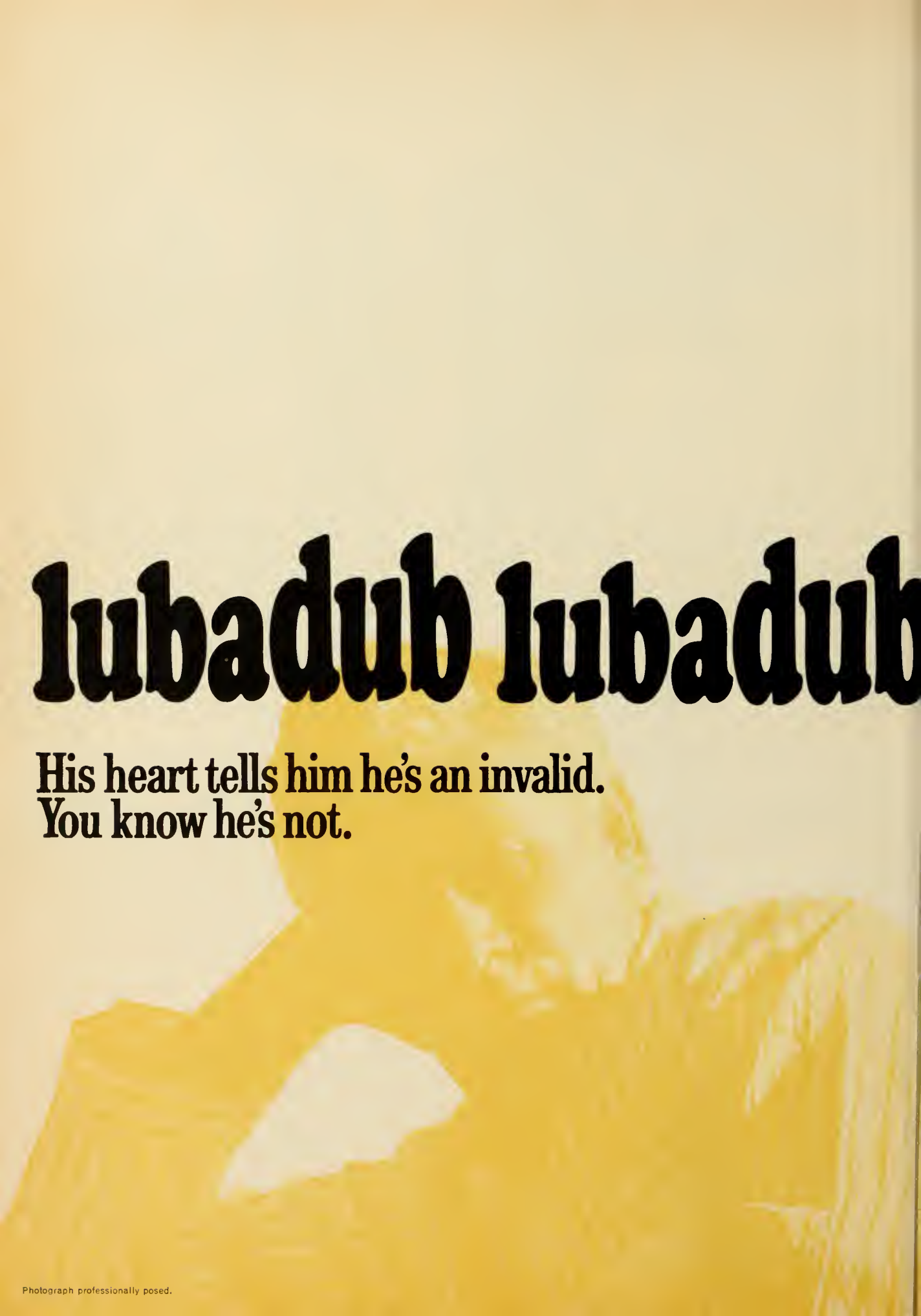
Zephiran® (brand of benzalkonium, as chloride, refined) 1:5000, antiseptic preservative and wetting agent to promote penetration and spread of the formula.



Winthrop Laboratories, New York, N.Y. 10016 Winthrop

lubadub lubadub

His heart tells him he's an invalid.
You know he's not.



Photograph professionally posed.

Contraindications: History of sensitivity to meprobamate.

Important Precautions: Carefully supervise dose and amounts prescribed, especially for patients prone to overdose themselves. Excessive prolonged use has been reported to result in dependence or habituation in susceptible persons, as alcoholics, ex-addicts, and other severe psychoneurotics. After prolonged excessive dosage, reduce dosage gradually to avoid possibly severe withdrawal reactions. Abrupt discontinuance of excessive doses has sometimes resulted in epileptiform seizures.

Warn patients of possible reduced alcohol tolerance, with resultant slowing of reaction time and impairment of judgment and coordination.

Reduce dose if drowsiness, ataxia or visual disturbance occurs; if persistent, patients should not operate vehicles or dangerous machinery.

Side Effects include drowsiness, usually transient; if persistent and associated with ataxia, usually responds to dose reduction; occasionally concomitant CNS stimulants (amphetamine, mephentermine sulfate) are desirable. Allergic or idiosyncratic reactions are rare, but such reactions, sometimes severe, can develop in patients receiving only 1 to 4 doses who have had no previous contact with meprobamate. Previous history of allergy may or may not be related to incidence of reactions. Mild reactions are characterized by itchy urticarial or erythematous maculopapular rash, generalized or confined to groin. Acute nonthrombocytopenic purpura with cutaneous petechiae, ecchymoses, peripheral edema and fever have been reported. One fatal case of bullous dermatitis following intermittent use of meprobamate with prednisolone has been reported. If allergic reaction occurs, meprobamate should be stopped and not reinstituted. Severe reactions, observed very rarely, include angioneurotic edema, bronchial spasms, fever, fainting spells, hypotensive crises (1 fatal case), anaphylaxis, stomatitis and proctitis (1 case) and hyperthermia. Treat symptomatically as with epinephrine, antihistamine and possibly hydrocortisone. Aplastic anemia (1 fatal case), thrombocytopenic purpura, agranulocytosis and hemolytic anemia have occurred rarely, almost always in presence of known toxic agents. A few cases of leukopenia, usually transient, have been reported on continuous administration.

Meprobamate may sometimes precipitate grand mal attacks in patients susceptible to both grand and petit mal. Extremely large doses can produce rhythmic fast activity in the cortical pattern. Impairment of accommodation and visual acuity has been reported rarely. After excessive dosage for weeks or months, withdraw gradually (1 or 2 weeks) to avoid recurrence of pretreatment symptoms (insomnia, severe anxiety, anorexia). Abrupt discontinuance of excessive doses has sometimes resulted in vomiting, ataxia, tremors, muscle twitching and epileptiform seizures. Prescribe very cautiously and in small amounts for patients with suicidal tendencies. Suicidal attempts have resulted in coma, shock, vasomotor and respiratory collapse and anuria. Excessive doses have resulted in prompt sleep; reduction of blood pressure, pulse and respiratory rates to basal levels; and occasionally hyperventilation. Treat with immediate gastric lavage and appropriate symptomatic therapy. (CNS stimulants and pressor amines as indicated.) Doses above 2400 mg./day are not recommended.

Composition: Tablets, 200 mg. and 400 mg. meprobamate. Coated Tablets, WYSEALS® EQUANIL (meprobamate) 400 mg. (All tablets also available in REDIPAK® [strip pack], Wyeth.) Continuous-Release Capsules, EQUANIL L-A (meprobamate) 400 mg.

Wyeth Laboratories Philadelphia, Pa.

ubadubdub lubadu

Anxiety is expected in the cardiovascular patient. A little may even be desirable.

But when anxiety is exaggerated . . . when it interferes with sleep . . . when it aggravates cardiovascular symptoms, your help may be needed.

Naturally, you'll want to reassure the patient.

And perhaps prescribe Equanil (meprobamate) as adjunctive therapy. It helps relieve anxiety and tension specifically, yet gently.

Almost 15 years' use has shown that Equanil is usually well tolerated as well as effective. Side effects are generally limited to transient drowsiness; serious, therapy-interrupting side effects are rare.

Equanil®

(meprobamate) Wyeth®



The two-stage power of the pink pill for U.R.I. symptoms is nothing to be sneezed at.

The immediate and continuous-release actions built into each Novahistine Singlet can give most of your patients prompt and long-lasting relief from symptoms of upper respiratory infection, including fever, aches and pains. Not only does Novahistine Singlet provide a vasoconstrictor-antihistamine formulation to reduce congestion and help restore normal ciliary activity; it also contains an antipyretic-analgesic compound to relieve the fever, aches and pains that so frequently accompany upper respiratory infections. A total daily dosage of 3 or 4 tablets will normally provide the continuous relief your patient expects. Use with caution in patients with severe hypertension, diabetes mellitus, hyperthyroidism or urinary retention. Caution ambulatory patients that drowsiness may result.

Pitman-Moore Division of
The Dow Chemical Company,
Indianapolis, Indiana.

Novahistine®
Singlet decongestant-analgesic

(Each tablet contains: phenylephrine hydrochloride, 40 mg.; chlorpheniramine maleate, 2 mg.; acetaminophen, 500 mg.)

DOW

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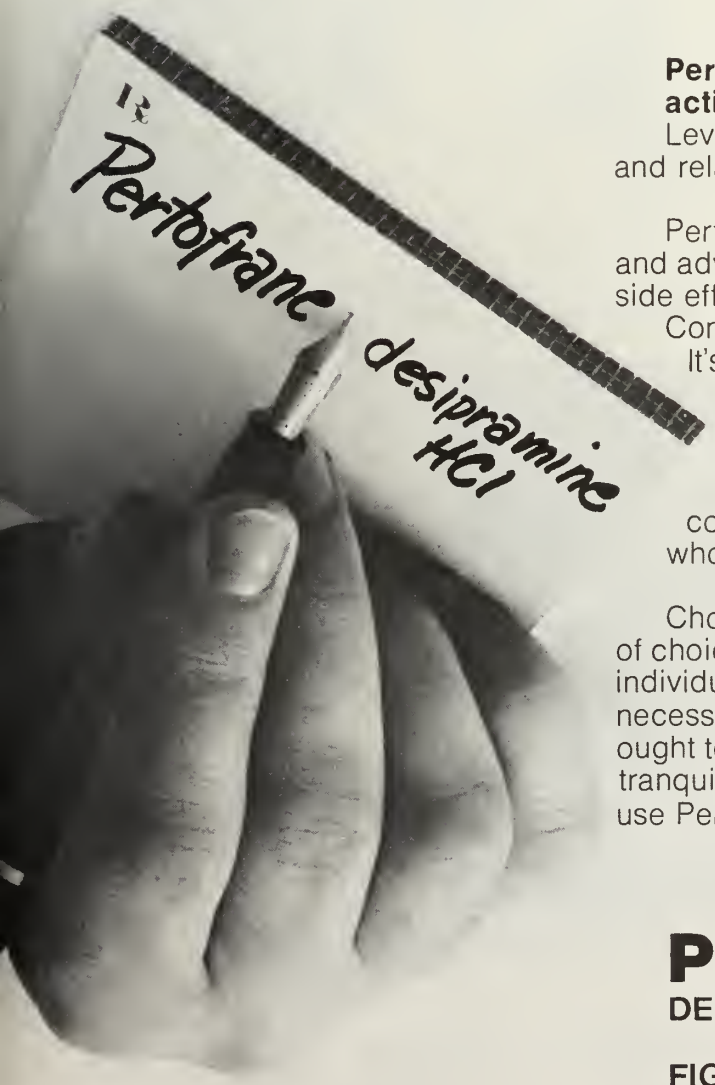
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Q. What methods will you use for collecting delinquent accounts? How does my state professional society feel about this?

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A. Medi Card will pay you up to the amount of credit shown on the face of the card, less the service charge.

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A. No. Medi Card will not publish such a list because professional participants are not members of Medi Card.

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Q. What is included in my professional Medi Card kit?

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Contraindication: Penicillin hypersensitivity.

Warnings: In rare instances, penicillin may cause acute anaphylaxis which may prove fatal unless promptly controlled. This type of reaction appears more frequently in patients with a history of sensitivity reactions to penicillin or with bronchial asthma or other allergies. Resuscitative drugs should be readily available. These include epinephrine and pressor drugs (as well as oxygen for inhalation) for immediate allergic manifestations and antihistamines and corticosteroids for delayed effects.

Precautions: Use cautiously, if at all, in a patient with a strongly positive history of allergy.

In prolonged therapy with penicillin, and particularly with high parenteral dosage schedules, frequent evaluation of the renal and hematopoietic systems is recommended.

In suspected staphylococcus infections, proper laboratory studies (including sensitivity tests) should be performed.

The use of penicillin may be associated with the overgrowth of penicillin-insensitive organisms. In such cases, discontinue administration and take appropriate measures.

Adverse Reactions: Although serious allergic reactions are much less common with oral penicillin than with intramuscular forms, manifestations of penicillin allergy may occur.

Penicillin is a substance of low toxicity, but it possesses a significant index of sensitization. The following hypersensitivity reactions have been reported: skin rashes ranging from maculopapular eruptions to exfoliative dermatitis; urticaria; and reactions resembling serum sickness, including chills, fever, edema, arthralgia, and prostration. Severe and often fatal anaphylaxis has occurred (see Warnings). Hemolytic anemia, leukopenia, thrombocytopenia, and nephropathy are rarely observed side-effects and are usually associated with high parenteral dosage.

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See package literature for detailed dosage instructions for prophylaxis of streptococcus infections, surgery, gonorrhea, and severe infections.

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of the
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Adverse Behavioral Effects as Manifestations of the Major and Minor Tranquilizers

Cor DeHart, M.D.*

Introduction

Tranquilizers are used in general practice and by the specialist to relieve apprehension and tension and to counteract undesirable behavior At times, these drugs show adverse side effects such as hypotension, skin rashes, tremors, but, behavioral changes often go unnoticed.

The minor undesirable alterations in the behavior of the seriously ill phychotic may not be observed in the office because the patient himself does not say so. However, his performance at home or at work may be affected, and we have to rely on a family member to detect this type of undesirable behavior change.

This article will only deal with the major and minor tranquilizers. These are the antipsychotic phenothiazine derivatives like chlorpromazine (Thorazine®), and the antianxiety drugs like chlordiazepoxide (Librium®).

The most important therapeutic characteristic of the antipsychotic agents is the calming effect on aggressive, overactive patients. Reduction of fear, panic and hostility is often followed by a reduction of symptoms like hallucinations and delusions.

The antianxiety drugs produce mild sedation without producing sleep and without interference with the clarity of consciousness.

The use of the antipsychotic drugs has become extensive and lately we know more about their side effects than we did ten years ago when these antipsychotic tranquilizers were first introduced on the market. It has become clear, for instance, that the antipsychotic drugs, at times, may produce psychoses; and that the antianxiety drugs may produce anxiety as an undesirable side effect. Any drug can, under certain circumstances, become toxic and can give therapeutically undesirable psychiatric symptoms. The psychiatric symptoms are closely related to the physiological changes that take place. These physiological changes could be a direct effect as a result of the action of the drug on the structures of the brain, or an indirect effect from the periphery. Of course, other factors play an important role, such as disposition, body build, personality, type, age and sex.

Tabulation of Side Effects

	Depressive	*Stimulative*
ACTIVITY:	Asthenia	Restlessness
	Apathy	Agitation
	Catatonic state	Hyperactivity
	Malaise	Acute maniacal behavior
	Fatigue	
PERCEPTION:	Delusions	Hypersensitivity to stimuli
	Hallucinations	
THINKING:	Decreased power of concentration	Flight of ideas
	Retardation	
AFFECT:	Depersonalization	Rage
	Pessimism	Hostility
	Sadness	Apprehension
	Threats of suicide	
	Hopelessness	
	Aversion of life	
	Despair	
CONSCIOUSNESS:	Somnolence	Bewilderment
	Drowsiness	Disorientation
	Poverty of ideas	Disassociative state
	Unattentiveness	
	Clouding of consciousness	
MEMORY:	Poor memory	Paranoid memory
		Maniacal behavior

Classification of Psychiatric Complications

In reviewing some of the literature from 1956 on until the present, it becomes clear that a large spectrum of psychiatric side effects of psychotropic drugs was reported. A systematic classification of the psychiatric complications is almost impossible, and actually covers the whole area of general psychopathology. Disturbances of

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activity, perception, thinking, affect, consciousness and memory were encountered. It is, however, interesting to see in an approximate tabulation, in which categories the psychiatric side effects belong. Some of these side effects were collected from the works of different reviewers.

From this we can conclude that the psychotropic drugs, according to the circumstances, can produce depressive or stimulative side effects. The stimulative side effects are, more or less, paradoxical reactions. They work just the opposite of the expectant results.

Actually, what we had done by giving a patient a tranquilizer is merely to replace a psychopathological condition with a psychopathological state of a psychopharmacological nature. In the attempts to restore a psychological equilibrium for the extremely disturbed hallucinating patient, we discover that some psychological alteration takes place, so that the disturbed patient becomes too quiet and too restrained.

Groupings of Psychiatric Side Effects of Psychotropic Drugs

Actually, we could distinguish two major types of psychiatric side effects of psychotropic drugs:

A. The toxic psychoses:
   1. The toxic confusional state
   2. Delirium
   3. Stupor
   4. Korsakoff's psychoses

The Toxic Confusional State

The toxic confusional state is a state of bewilderment, perplexity and disorientation, in which the patient is unable to hold his attention, he is distractable, he has an abnormal lability of affect. As an example, the following case history:

A 35-year-old woman was admitted to the hospital because she complained of not being able to do her housework, she felt depressed, and she withdrew and would sleep a good part of the day. She was started on thioridazine (Mellaril®), 25 mgs, three times daily. The first day of treatment she felt euphoric and she mentioned that she had never felt as good as she did right then. The second day she became restless and quite anxious, pacing the floors and asking questions constantly. She looked bewildered and perplexed, she mentioned that her memory was bad and that she could not remember the date. She became extremely anxious and tense. She told me later she remembered having the same reaction to this medication about four years previously, and still remembering the experience, she never wanted to go through it again. The medication was stopped and chlordiazepoxide (Librium®) was started. After the previous medication was discontinued, and the new medication started, she slept well, the patient was well oriented, did not feel confused any longer, did not pace the floor, and did not show any further apprehension or tenseness.

Most toxic psychoses did occur, however, when high doses were used. Now that the high doses have been decreased, so have the toxic psychoses.[1]

Delirium

A somewhat different kind of drug effect was noticed by an 84-year-old man who took chlorpromazine, 50 mgs, four times daily, for several days. He gradually started to suffer from impaired attention, drowsiness, he could not grasp reality very well, and his consciousness fluctuated. He had frightening dreams and fantasies, and apparently, had visual hallucinations. After discontinuation of the medication, he regained his grasp on reality and the hallucinations and fantasies left him. These delirious conditions are more frequently seen in the elderly.

Stupor

A 28-year-old man was treated with fluphenazine (Prolixin®), 2.5 mgs., three times daily, because of an obsessive, compulsive condition. After about one week of this therapy, he returned to the office intensely apathetic, he appeared very preoccupied, sat in the chair without moving a limb, but appeared to be conscious of his surroundings. He had not eaten for days. This man appeared to be in a catatonic-like stupor, and this condition disappeared after discontinuation of the medication. In 1959, R. H. May described catatonic-like states following phenothiazine therapy.[2]

Korsakoff-like Psychosis

The occurrence of an acute Korsakoff-like brain syndrome with memory loss, labile affect, confabulations, and impaired attention was described by R. J. Hallberg in 1964. Apparently, this condition is quite rare because the literature is, to my knowledge, void of any other descriptions of a Korsakoff-like psychosis associated with the use of anti-psychotic or anti-anxiety medication.[3]

B. Minor Adverse Behavioral Effects

The minor side effects are very close to neurotic symptoms as we see them in the anxiety neurotic or in the hysterical neurotic. The patient is tense, apprehensive, restless, and may have nightmares. On the other hand, he may feel sleepy, tired out, may complain of poor memory, a decreased power of concentration, malaise or drowsiness. The symptomatology may be very similar to the symptomatology of depressive neurosis. Apparently, when the patient has been relieved of most of his original symptoms he still does not feel like he did before, but he may interpret the new psychopharmacological feeling as tiredness, drowsiness and malaise.

L. Meyler has summarized these adverse reactions as reported in the medical literature in his book, Side Effects of Drugs.[4]

Treatment of Some of the Adverse Behavioral Reactions

Sometimes the results of adverse reactions are misdiagnosed as hysteria, and even bigger doses of tran-

quilizing medication are given resulting in greater pseudo hysterical turmoil. In this situation, it is important to make the right diagnosis of the adverse behavioral reactions. The remedy should be lowering the doses, with a consequent reduction of symptomatology.

Also in the pseudo depressive side effects, it is important to remember that to remedy the dullness and the apathy, the tranquilizer should be reduced to lower doses, which will result in the disappearance of dullness and apathy. It would be wrong to stop the tranquilizer and start anti-depressive medication.

At times, some of the minor tranquilizers like chlordiazepoxide and diazepam (Valium®) may cause an euphoria and an overly confident attitude. Actually, chlordiazepoxide has three different pharmacological actions: namely, an anti-anxiety action, a sedative and a stimulating effect.[5] It is good to recognize the side effect and interpret this to the family, who may not be able to handle this, and, as such, it may make the patient quite uncomfortable in his family.

Autonomic Nervous System Changes

The dry mouth, the quick heart beat, the low blood pressure, or the blurred vision could very well influence the state of mind of the patient to a degree of restlessness and agitation. Here again, lowering of the amount of tranquilizer may improve the mental status.

Some Special Adverse Manifestations

1. In the beginning of therapy with tranquilizers, the patient may complain of restlessness, difficulty sleeping, and increased dream activity and nightmares. It is important to keep the patient on the tranquilizer despite these discomforts, because these symptoms may disappear after some time on continued therapy.

2. Phenothiazine derivatives potentiate the effects of other central depressants and also of alcohol. The anti-anxiety medications also potentiate the effects of alcohol. It may be important if certain drowsiness is reported, to ask the patient about his drinking habits. I advise my patients not to drink alcoholic beverages when they take tranquilizers.

3. Sometimes the anti-anxiety medication may give rise to lack of self criticism and an overly confident attitude. This could be dangerous when driving a car, or when handling dangerous equipment.

4. A sudden psychotic reaction may occur when a high maintenance dosage is suddenly discontinued. This may lead to an acute outbreak of a schizophrenic psychosis. Appropriate after care of patients with high maintenance dosage is necessary.

Summary

The adverse behavioral effects of the major and minor tranquilizers were described. Actually, the side effects of these tranquilizers appear to cover the total spectrum of general psychopathology, giving disturbances as manifested in depression, or stimulation of activity, perception, thinking, affect, consciousness and memory. The minor side effects can imitate many of the neurotic conditions. We distinguished the pseudo depressive and pseudo hysterical type of adverse behavioral effects. The major adverse effects were of a psychotic nature. They could give rise to toxic confusional states, stupor, delirium, as well as Korsakoff's psychosis. Modest guidelines were given about how to alleviate the side reactions. Special dangerous manifestations such as potentiation and the sudden discontinuation of high maintenance dosage were discussed.

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ANNUAL MEETING DATES FOR YOUR 1969 CALENDAR

Maine Medical Association, June 15-17, 1969 at The Samoset, Rockland, Maine

American Medical Association, July 13-17, 1969, New York, New York

Diagnostic Accuracy in Rehabilitation Medicine*

Richard T. Chamberlin, M.D.

Medicine is said to encompass three broad phases – preventive medicine, acute medicine, and rehabilitation medicine.[1] The concept of comprehensive medicine naturally includes all of these phases with emphasis at the appropriate level for the individual patient. One of the most important elements which ties these three phases together is the medical diagnosis. Yet at each level of medicine the diagnosis may have slightly different implications.

In preventive medicine a diagnosis is frequently used to simply categorize disease as it is related to age groups, environmental factors or other risk factors in order that subsequent preventive measures may be instituted. In acute medicine a diagnosis frequently dictates the immediate therapeutic measures to be taken. In rehabilitation medicine the implications of the diagnosis already mentioned are still important, but in addition the accuracy and completeness of the diagnosis becomes increasingly important. One must hasten to add that accuracy is, of course, of extreme importance at all levels, but in rehabilitation medicine it has a precise connotation.

The purpose of this brief communication is to document the importance of the accuracy of diagnosis in rehabilitation medicine by presenting two illustrative case histories. A brief discussion of the diagnostic process is included.

Case No. 1

A twenty-one-year-old white male was admitted to Thayer Hospital with a complaint of fecal and urinary incontinence. A diagnosis of cerebral palsy had been made shortly after the birth of the patient with features including strabismus, partial right hemiplegia, and question of mongoloid features. As he grew and developed mental retardation became evident. A prolonged and complete evaluation at a rehabilitation center four years prior to admission at the age of seventeen revealed a poor prognosis for retraining due to the patient's inconsistencies in responses and behavior. However, in the four years prior to admission the patient lived an orderly and protected life at home. He was capable of self feeding and toilet and had an active interest in sports including the ability to calculate and remember batting averages of all players on his favorite teams. Although clumsy, he was accepted in neighborhood children's games. One month prior to admission the patient began to have incontinence of his bowels and become sullen and withdrawn. A complete physical examination, routine laboratory work and barium enema examination failed to reveal any abnormality. The incontinence became an increasingly difficult problem in home care and one day prior to admission he was very lethargic and ran a fever. Upon admission to the hospital his physical examination and laboratory studies were all normal.

Initially there did not seem to be any real explanation for the patient's deterioration and it was considered to be simply due to some as yet unrevealed emotional upset superimposed on his palsy. A general supportive program of physiotherapy was instituted. The rehabilitation team made a study of the previous medical data, home evaluation, family interview and evaluation, and the patient underwent a psychiatric evaluation. No definite factors were revealed to explain the medical changes.

The patient's initial response to treatment was good. He became more tractable and incontinence was much improved. However, the improvement failed to continue and there was return of all of his symptoms including progressive refusal to eat. Four weeks after hospitalization his general medical condition was reviewed and included the following: increased proptosis of the left eye, and increasing weakness of the right side. Coincidentally on the day of this examination the patient had a generalized convulsion. Skull x-rays revealed an enlarged sella turcica with erosion of the posterior clinoid processes suggesting a pituitary tumor. Brain scan revealed a large area of increased uptake of radioactivity in the anterior one-half of the left cerebral hemisphere as well as some crossing over of this activity to the right side. Electroencephalogram was grossly abnormal with delta activity on the left and some slowing medially on the right. Bilateral carotid and brachial arteriograms revealed a highly vascular space occupying lesion involving the left temporal area with a shift of the midline vessels and huge communicating blood vessels to dilated emissary veins. While plans for possible surgical attack on this lesion were being discussed the patient became suddenly moribund and expired on his forty-seventh hospital day. Post mortem examination was refused. A final diagnosis of brain tumor, anterior fossa, type undetermined was made.

Case No. 2

A seventy-one-year-old carpenter was admitted to Thayer Hospital with a chief complaint of being unable to use his legs. In 1962 shortly after developing diabetes mellitus the patient's legs collapsed and remained quite weak for over a year. He did his own physiotherapy at home and did regain function of his legs gradually but noticed that the bulk of the muscles in his right leg never did return to normal size. There were no subjective sensory changes associated with that episode. He was able to continue his work as a carpenter until January or February of 1968 when he began to develop gradual weakness in the muscles of his right hand. Over the next six months, this progressed slowly and involved both hands as well as becoming associated with stiffness of these muscles and onset of similar symptoms in the legs. His diabetes remained in good control during all of this time on diet and insulin. The weakness in the legs became so profound that he was admitted to the hospital. There had been no history of injury of any kind within his recollection. There was also no difficulty with bowel or bladder control at any time either in 1962 or with the present illness. On physical examination the major findings were in the neuromuscular-skeletal system. There was atrophy of the small muscles of the hand and marked atrophy of the right gastrocnemius muscle. The Babinsky response was present on the left and equivocal on the right. The remaining neurological examination was not recorded. The admitting diagnosis was neuropathy of undetermined cause. All of the routine blood work including a chemical profile and chest x-ray were normal and his blood sugars in the first few hospital days showed good control with his standard dose of insulin.

An active physiotherapy program was started and although he was quite cooperative and seemed to be well motivated, there

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was no appreciable improvement in the state of his muscle weakness over a three-week period, as well as some question of actual worsening particularly of his legs. A medical consultant was unable to clarify any further general findings particularly as far as the cause of neuropathies might pertain. A neurosurgical consult was then obtained. His findings summarized briefly included atrophy and weakness of all distal musculature especially in the hands, fasciculation of the muscles, resistance of muscles to passive stretching, hyperactive reflexes throughout with bilateral Hoffman and Babinsky signs, loss of light touch, deep pain and vibration senses distally in all extremities with the left being slightly worse than the right. A cervical myelogram was then done showing a nearly complete block at the level of C5-6 with marked narrowing of the invertebral joint space between C5 and C6. It was the opinion of the radiologist that these findings were best explained by disc disease. Subsequently a cervical laminectomy was done with the findings of a large central disc protrusion in the midline with extreme cord compression at that level.

Following recovery from surgery the patient returned to a full physiotherapy program and is making slow but definite recovery particularly in the strength and coordination of his legs.

Discussion

Dr. Howard Rusk has listed the objectives of rehabilitation as follows: "The first objective of rehabilitation is to eliminate the physical disability if that is possible; the second, to reduce or alleviate the disability to the greatest extent possible; and the third, to retrain the person with residual physical disability to live and work within the limits of his disability but to the utmost of his capabilities." Dr. Rusk also has said, "The diagnosis and prognosis must be accurate, for it is upon them that feasibility of retraining is determined."[2] Both of these cases illustrate how diagnostic omissions or errors may cause failure to accomplish the objectives of rehabilitation.

It is possible that the medical community in general is not aware of the exact degree of accuracy in any diagnosis. If one thinks in purely anatomical terms which can be substantiated at the autopsy table, the field of geriatric medicine allows a good opportunity to study this problem. At one time it was estimated that 45% of the diagnoses in old age were incorrect as determined by autopsy evaluation.[3] Since the older patients are frequently referred for some degree of rehabilitation, the possible implication of such a high rate of diagnostic inaccuracy is obvious, especially in terms of the utilization of rehabilitation personnel. Thus it has become a practice in many rehabilitation centers to carefully review the diagnosis as the very few step in the rehabilitation procedure. An obvious correlary is the need to review the accuracy of the diagnosis in rehabilitation patients who are not making the expected progress in the rehabilitation program which has been prescribed for them. This was the situation in both of the cases presented here.

Recently the subject of diagnosis was analyzed quite thoroughly by Engle and Davis.[4] One of their many points bears emphasis – that is – that the word diagnosis includes two important aspects. First is the diagnostic process itself which, in effect, represents the mental processes used as the diagnosis is reached. The second aspect of diagnosis is the decision itself based on these mental processes leading to a word representing a disease. In all of medicine there is a tendency to stop the diagnostic (mental) processes once the diagnosis (decision) is reached. A patient, particularly one with multiple problems does not remain in the static state implied by a finalized decision or diagnosis. In the patients' discussed, particularly the first one, it was the tendency of those caring for him to rest on the established diagnosis of cerebral palsy that led to the situation which could have so completely turned the diagnostic processes off and resulted in a completely missed diagnosis.

Summary

The importance of the accuracy of the medical diagnosis in rehabilitation medicine is illustrated by two representative case histories. Emphasis is placed on the concept that a medical diagnosis includes important continuing mental processes in addition to the more static decision or disease naming aspect. Accuracy and completeness of diagnosis is enhanced if the mental processes which lead to the decision continue and modify the initial decision as indicated. Static diagnostic decisions which are not reviewed in this manner have important implications in rehabilitation medicine.

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Pregnancy and Papilledema*

Bruce Trembly, M.D. and Robert J. Takach, M.D.

The occasional association of common symptoms with uncommon disease serves to keep a physician alert to other possibilities. Two illustrative cases recently came to Thayer Hospital, each with common symptoms of vomiting and headache in early pregnancy. However, each of these patients was found to have a serious neurologic problem, discovered because the eye grounds were examined. Our purpose in presenting these cases is to point out the value of carefully examining the ocular fundi in patients whose headaches seem out of the ordinary and who complain of double vision or difficulty with their balance.

Case Reports

Case No. 1 – *History:* An 18-year-old girl from Wiscasset was seen by her own physician for the first time fairly late in pregnancy. She had complained of episodic feelings of dizziness and actual falling prior to and during the early stages of pregnancy. Frequent vomiting without nausea did not stop after the third month of pregnancy, and she finally brought herself to her physician close to the point of delivery. She was then having headaches which she described as "raging" with vomiting and inability to stand alone continuing after delivery. She was delivered uneventfully of a healthy child just before term at another hospital, and was seen soon thereafter in consultation.

Examination: She was found to have severe papilledema with retinal hemorrhages, a left sixth nerve palsy, cerebellar nystagmus, slightly stiff neck and a staggering gait. Fig. 1 demonstrates a normal disc. For comparison, Fig. 2 shows her papilledema prior to operation. Visual acuity and confrontation visual fields were grossly normal. The pupils reacted normally to light and in accommodation. Skull x-rays were normal as were routine blood studies and chemical profile. A mercury #197 brain scan demonstrated an area of increased uptake in the midline posteriorly, and an EEG showed gross dysrhythmia and generalized slowing. A retrograde brachio-vertebral arteriogram showed no increase in vascularity, and no displacement of the vertebral and basilar arteries or their branches.

Operation: On August 31, 1968, a posterior fossa craniectomy disclosed a large non-cystic astrocytoma of the cerebellar vermis. (Fig. 3) occupying the entire fourth ventricle, having originated on the right lateral roof of the fourth ventricle. The cerebellar tonsils were displaced downward to C-2. This tumor was removed in its entirety under magnification and the patient made an uneventful recovery with rapid reduction of headaches and gradual resolution of papilledema. At last follow up in November, 1968, she had no papilledema, slightly wide based gait, no nystagmus and a resolving left sixth nerve palsy. Visual acuity was 20/30 in each eye.

Case No. 2 – *History:* An 18-year-old girl from Guilford was seen by both authors in May, 1968, with complaints of double vision and a drooping left eye lid. These symptoms were associated with steady headache of one month's duration. Eye examination revealed a visual acuity of 20/25+ bilaterally and normal visual fields. The left eye was deviated down and out, with diplopia in all fields. She could straighten her eyes with effort, however, and on ductions the eyes moved normally. Ptosis was present on the left. The pupils were equal in size and reacted normally to light and accommodation. There was no papilledema present, and she demonstrated no other neurologic abnormality. Our impression was that this possibly represented an early stage of a demyelinating process such as multiple sclerosis. The patient was advised to return for periodic follow up. She did not return, but saw her own physician in November, 1968, two months pregnant, complaining of frequent vomiting and extremely severe headaches. He found papilledema and increased abnormality of eye movements.

Examination: On admission to Thayer Hospital she had four-diopter papilledema with edema extending to the maculae[1] and a visual acuity of 20/200 bilaterally (Figs. 4 and 5). She also had dissociation of eye movements with inability to converge, a left sixth nerve palsy, constant diplopia and 3mm. non-reactive pupils. She also had left facial and corneal hypersensitivity and hyperactive symmetrical tendon reflexes. Gross visual fields were full. Skull x-rays were normal, and there was no erosion of the sella. Radioactive technicium brain scan and arteriographic studies were not done because of the radiation risk to her pregnancy. Air contrast studies were not done from below because of the severe papilledema, and it was elected to explore the posterior fossa to rule out neoplasm.

Operation: Posterior fossa exploration on November 28, 1968, disclosed normal cerebellar hemispheres, with no evident tumor in the cerebellopontine angles or in the fourth ventricle. The cerebellar tonsils were not displaced. The right lateral ventricle had been cannulated and was found to contain clear fluid under increased pressure. The caudal end of the cerebral aqueduct was visualized after partial splitting of the cerebellar vermis, which contained no tumor, and it was noted that no spinal fluid came from the aqueduct. Saline was injected into the right lateral ventricle, and no fluid was seen to pass through the aqueduct. A Torkildsen ventriculo-cisternal shunt was done using a Rickham reservoir.[2] The patient tolerated the four-hour surgery well with immediate reduction of headaches and gradual resolution of papilledema. The Torkildsen shunt allows cerebrospinal fluid to bypass the blocked aqueduct, and normal intracranial pressure is thereby maintained.

Extraocular movements began to return to normal, and the facial hyperasthesia subsided promptly. Visual acuity improved to 20/30 bilaterally over a five-day period postoperatively. Subsequently, percutaneous injection of oxygen into the diaphragm of the Rickham ventriculostomy and limited x-ray study, disclosed symmetrical dilatation of both lateral ventricles and third ventricle, with no filling of the cerebral aqueduct and no displacement of the visualized pineal body or suprapineal recess (Fig. 6). This picture is consistent with aqueductal stenosis, and at the time of this writing further diagnostic studies are deferred.

Discussion

In each of these patients, common symptoms of vomiting, headache, and dizziness were present early in pregnancy. These symptoms could have been passed off as ordinary nausea and malaise of pregnancy. However, their physicians were concerned about the intensity of the headaches and by the discovery of papilledema. Subsequent careful history-taking disclosed a period of staggering and falling prior to pregnancy in the first case, and the second case had documented left ptosis and partial ophthalmoplegia before pregnancy began. Each of

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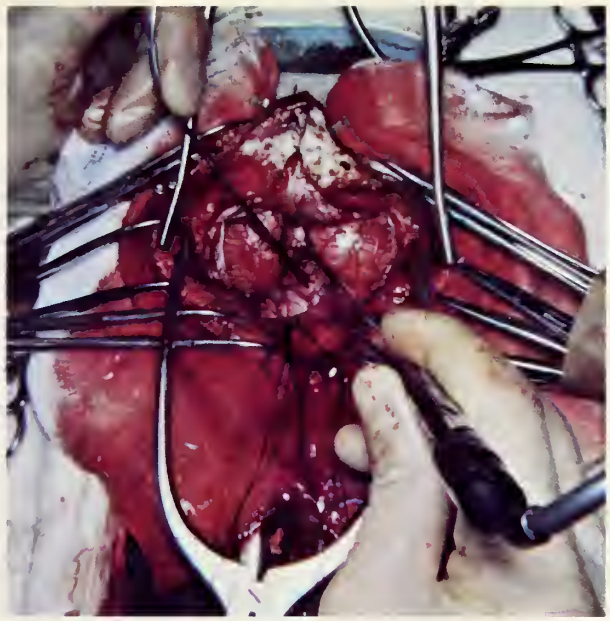


Fig. 3 – Operative photograph of posterior fossa shows tumor at tip of sucker held in left hand. Forceps in right hand indicate margin of tumor against right cerebellar hemisphere. Unopened portion of vermis lies above the tumor, and displaced cerebellar tonsils lie below. Patient is in upright position with neck flexed; midline incision extends from occiput to midcervical spine.

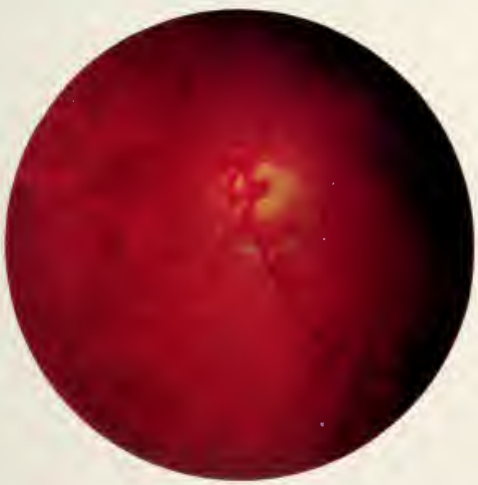


Fig. 1 – Normal optic disc. Note sharp disc margins and pale central physiologic cup.



Fig. 2 – Papilledema. Marked edema and elevation of optic disc with blurred disc margins. Note tortuosity and dilation of retinal veins.

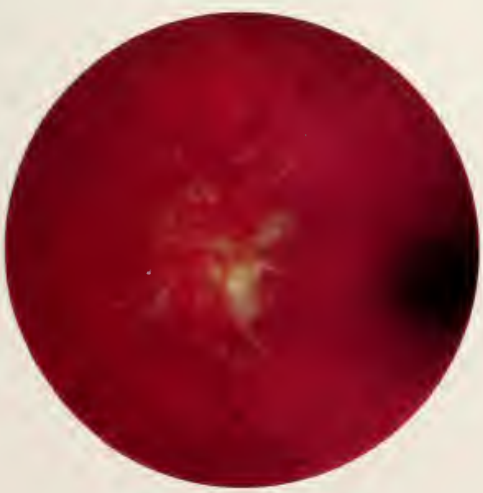


Fig. 4 – Papilledema. Right eye case 2. Marked edema extending out from disc to macula. Many hemorrhages in area of optic disc.



Fig. 5 – Papilledema. Left eye case 2. Marked edema of disc extending out to macula. Hemorrhage less than right eye but edema almost as severe.



Fig. 6



Fig. 6

these patients developed severe papilledema during pregnancy with hemorrhages and exudates as indicated in the fundus photographs. Early papilledema is difficult to diagnose, and if suspected, should be referred for another opinion and specific diagnostic techniques such as fluorescein angiography of the optic disc. Gross papilledema, however, is easily detected.

The astrocytoma removed in the first case is a relatively benign tumor (Grade I to II) and is rare after the age of 15 years. The peak incidence of cerebellar astrocytomas is in the five to nine year age group.[3] Prognosis for long term survival is excellent.

The diagnosis of primary aqueductal stenosis in the second case will require continued observation. Stenosis in this narrow passageway may be preceded by a long period of inadequacy, possibly on a congenital basis, with intermittent symptoms. There is no previous history of trauma or illness which might have produced inflammatory changes within the ventricular system to account for an acquired aqueductal stenosis.[4] Primary aqueductal stenosis is predominantly a disorder of childhood, although it is known to occur in adults. It is difficult to differentiate from acquired aqueductal stenosis, and may produce a variety of neurologic signs and symptoms.[5]

An intrinsic glioma of the brain stem usually produces progressive cranial nerve abnormalities and long tract signs without blockage of the aqueduct and increased intracranial pressure. The degree of papilledema seen in the second case is not encountered in pseudotumor cerebri. No tumor was found in the fourth ventricle or elsewhere in the posterior fossa, and the ventriculogram did not show evidence of tumor within the third ventricle or in the pineal region.

The association of pregnancy with the signs and symptoms seen in the two cases presented is most likely circumstantial, although the changes in extra cellular fluid in pregnancy may have accelerated the development of symptoms of increased intracranial pressure. The presence of early pregnancy, on the other hand, requires the physician to be cautious in his choice of radiographic and radioactive techniques. In each of these cases, surgery provided the definitive diagnosis as well as therapy.

Summary

Two cases are presented in which relatively common symptoms of vomiting, headache and dizzy feelings associated with pregnancy were also associated with intracranial disease. Severe headaches, diplopia, and ataxia in any patient, whether pregnant or not, should alert all of us to reach for the ophthalmoscope.

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Inverted Papilloma

Loring W. Pratt, M.D.* and Irving I. Goodof, M.D.**

Polyps are common tumors in the nose and paranasal sinuses. The change of morphology from polyp to inverted papilloma is an interesting and unusual alteration in configuration. In general, although histologically benign, they are persistent and may show the clinical behavior of a low grade malignancy. The association of these tumors with epidermoid carcinoma is most unusual and occasions this report.

Historical

In 1854 nasal papillomas were first described by Ward[1] but because of their relative rarity little information resulted from their study. In 1935 Kramer and Som[2] were able to accumulate only thirty-five cases from the literature. They added five cases of their own to this list.

In 1903 Calamiade and Citelli (cited by Omerod[3]) first divided carcinomas of the nasal mucosa into (1) Squamous cell, (2) Pure cylindrical cell, arising from the glands and (3) mixed, which is the most common type. This lesion is mainly squamous but has certain cylindrocellular elements.

In 1951 Omerod reviewed the literature and presented a series of changes detailing the development of inverted papillomas from nasal polyps as proposed by Ringertz.[4]

In 1962 Norris[5] reported twenty-nine cases of inverted papillomas and their clinical behavior. He reported a preponderance of these tumors in the male and also an increased incidence in the Negro. The mean age reported was forty-nine years. In 1967 Cody[6] reported seven cases, none of which was associated with malignancy.

In 1968 Fechner and Alford[7] reported a case of inverted papilloma associated with squamous cell carcinoma of the antrum and described it as "an unusual case."

Saxen[8] had previously commented on the relationship between nasal polyps, papillomas and cancer in 1952.

Case Reports

Case 1: This seventy-year-old man was first seen in 1962 with the complaint that he had nasal polyps. The polyps were removed one week after his initial visit and were found to be inverted epithelial papillomas. X-rays revealed diffuse clouding of his left maxillary antrum without evidence of fluid level or of bony destruction. There was a soft tissue density extending into the left antrum (Fig. 1). He had smoked a pipe for five years but did not drink. A left Caldwell-Luc operation with intranasal antrostomy was performed. Pathologic examination of the tissue revealed inverted papilloma with one area suggestive of malignancy. The wound healed well and no further abnormal tissue was noted in this area until nine months later when more tumor was found and removed. Pathologic diagnosis again was inverted papilloma (Figs. 2, 3 and 4). Once more, seventeen months from the first visit, he was found to have abnormal tissue in his ethmoid region and polypectomy and intranasal ethmoidectomy were performed. Once more the diagnosis was inverted papilloma. He has been followed regularly at three-month intervals and remains well to the present time.



Fig. 1. Clouding of left maxillary antrum with intact bony walls.

Case 2: This sixty-three-year-old man was seen early in 1965 with a chief complaint of nasal obstruction. A firm white mass protruded from his left nostril and a diagnosis of inverted papilloma was made clinically. This was confirmed by the pathologist.

He had smoked twenty cigarettes a day for forty years, and did not drink. He had previously had a nasal polypectomy in 1958.

Although the pathologist made a report of benign mucous polyps at that time, he described both epithelial hyperplasia and metaplasia, suggesting that this might even represent an epithelial neoplasm. He further suggested that the patient should be closely watched for signs of recurrence of these masses.

X-ray revealed a diffusely clouded left maxillary antrum with some loss of definition of the nasal wall of the antrum. Soft tissue swelling was noted in the nares, and definite thinning of the bone, suggesting destruction of the nasal wall. The radiologist felt this change was secondary to tumor.

A left Caldwell-Luc operation was done revealing an inverted papilloma and nine months later a right Caldwell-Luc was done also revealing inverted papilloma. He has remained well and free of disease since that time.

Case 3: This fifty-three-year old man presented himself in 1962 with epistaxis of thirty hours duration. He was found to

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Fig. 2. Inverted papilloma – benign – showing gross nature of lesion. X3 Hematoxylin and Eosin stain.

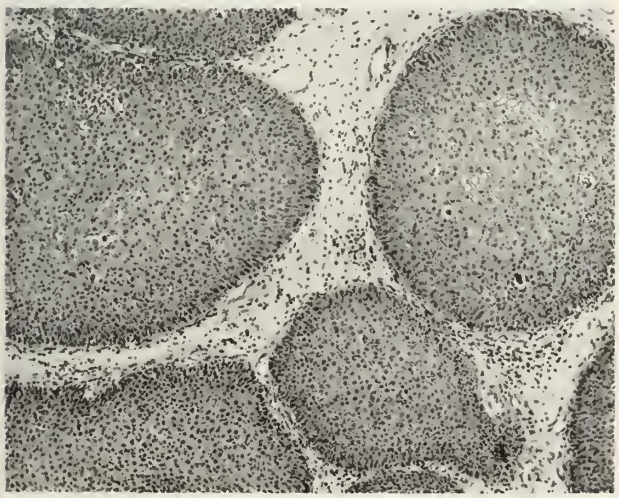


Fig. 3. Inverted papilloma – benign – showing intact basement membrane and cylindric nature of cells. X100 Hematoxylin and Eosin stain.

have a large pale white hard polyp in the right nostril. It was not possible to see the bleeding point without removing this mass, and the bleeding stopped promptly after the polyp was

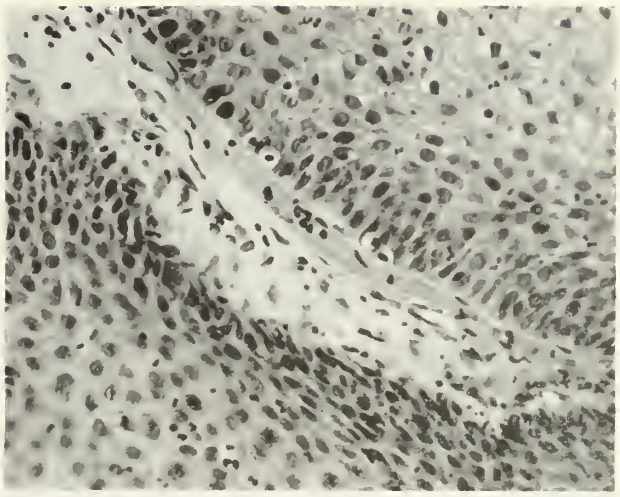


Fig. 4. High power view of Fig. 3. X400 Hematoxylin and Eosin stain.



Fig. 5. Right alveolus showing malignant ulceration of mocosa and widening of alveolus.

removed. He gave a definite history of smoking thirty cigarettes a day for forty years and of drinking regularly and excessively since age fifteen.

The pathologist reported the "polyp" as "benign epithelial papilloma inverted type." When he was seen for follow-up one month later he reported that the right side of his mouth had been sore for six weeks and that he had had an ulcerated lesion in his right alveolar process (Fig. 5) which had been present for two weeks. This was hidden under his denture. X-rays of his sinuses at that time showed bilateral clouding of both maxillary antra and erosion of the bone of the lateral wall of the right antrum. (Fig. 6). Again material was sent for histologic study and was reported as benign epithelial papilloma inverted type, of the nose and epidermoid carcinoma Grade III from the right alveolus (Figs. 7 and 8). Six weeks after his initial epistaxis a



Fig. 6. X-ray of maxillary antrum showing clouding of right antrum with destruction of lateral bony wall.

right maxillectomy en bloc with orbital exenteration was performed through a modified Webber-Fergusson incision. The cavity was lined with a split thickness skin graft. Recovery was uncomplicated except for the development of acute suppurative parotitis which interfered with his comfort for about one week. Because of the histologic nature and gross extent of the lesion, he was urged to accept postoperative radiation therapy but refused and procrastinated. He finally went to another hospital where intra-arterial infusion therapy was attempted without benefit. This was then followed by deep x-ray therapy which produced no improvement and he died almost exactly one wear from the date on which he was originally seen.

These three cases are the only cases of inverted papilloma encountered by the author in his practice. They are of interest in that all were found in caucasian males, all were in the middle age group, and all had the same characteristic appearance of this papillomatous lesion, grossly and microscopically.

Of particular interest is the fact that in all three cases there were associated nasal polyps which may possibly have followed the metamorphosis suggested by Ringertz and given rise to the inverted papillomas. In one case there was an associated epidermoid carcinoma. It is impossible to be certain that this relationship was more than coincidental, although the presence of an aggressive benign tumor in this patient does suggest the possibility that malignant alterations may have taken place and produced the clinically disastrous epidermoid cancer of the maxillary antrum. The two cases of inverted papillomas

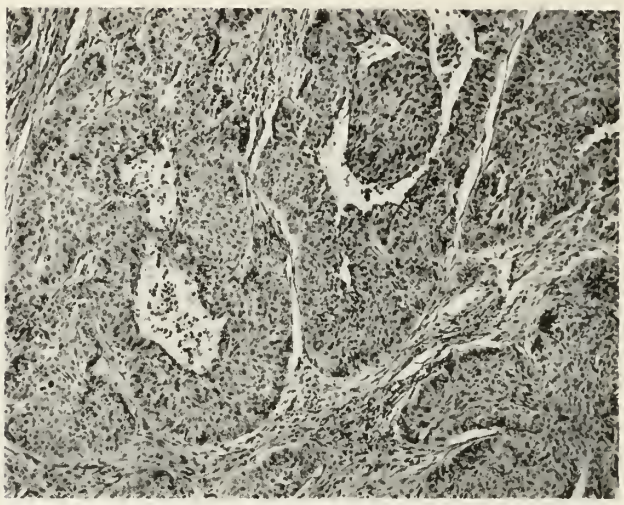


Fig. 7. Cylindric cell carcinoma associated with inverted papilloma. X100 Hematoxylin and Eosin stain.

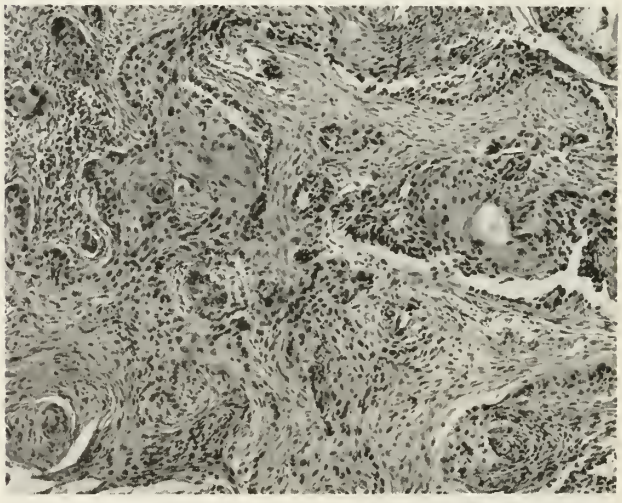


Fig. 8. Section of tissue adjacent to Fig. 7 showing keratinization, epithelial pearls and typical appearance of epidermoid carcinoma. X100 Hematoxylin and Eosin stain.

without associated malignancy are well and free of disease six and two years later respectively. The case with associated carcinoma was dead one year from the time of his initial epistaxis.

Discussion

For a long time clinicians classified the papillomas as hard or soft which is a physical condition entirely related to the relative amounts of epithelium and stroma. Those masses with a preponderance of epithelium were described as hard, while those with relatively more stromal tissue were described as soft. This latter group is more generally friable and bleeds more easily.

Histologists have classified papillomas as cylindric or squamous, depending upon the type of epithelium which is present. The older pathologic term "cylindric cell" is synonymous with the currently popular term "columnar cell." In 1938 Ringertz made a study of his eleven cases

of papillomas and found that eight were of the columnar cell type. He noted that these tumors might be either hard or soft and that the soft tumors had the usual velvety appearance of the papillomas, while the hard form gave more of a mulberry-like appearance. In contrast to the papilloma which proliferates epithelium from a broad surface carrying its stroma along with it in a series of fronds, the hard form proliferates internally, forcing the stroma apart and producing a mass which Ringetrz suggested should be called an inverted papilloma. He also describes in some detail the manner in which the epithelium of a nasal polyp may, by invagination and proliferation, give rise to the entity now described as inverted papilloma. The inverted papilloma has a thick, slightly rough surface which is marked by numerous small pits of indurations.

Although these tumors are microscopically benign, the literature is replete with accounts of cases in which many recurrences have closely followed the clinical course of a low grade malignancy. The treatment of choice is wide local excision and prolonged meticulous follow-up. Each recurrence should be treated aggressively with further local excision.

Conclusions

1. Three cases of a rare tumor of the nose and sinuses, fitting the classical description of inverted papilloma, are presented.

2. These are locally persistent tumors and must be removed with more than the usual margin for a benign tumor.

3. One case with associated epidermoid cancer is presented. This is an unusual association, according to the literature.

4. All nasal polyps should be sent for pathologic examination when removed. This is especially important in case of recurrence.

Acknowledgement

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Maine Sets Example For Effective Liaison

"As Maine Goes, So Goes the Nation," or so it has been said. Would that it were true, especially with regard to component society liaison activities with other medical organizations, and posts held in other significant medical activities.

The Maine Society, one of ASIM's smaller components with 68 members (only 15 components have fewer members), has established an effective liaison program.

For example, Maine SIM members hold the following offices in their state:

Chairman, Council of the Maine Medical Association

Alternate delegate to the AMA

Assistant to the Commissioner of Health and Welfare

President, Medical Care Development, Inc., Regional Medical Program of Maine (PL 89-749)

Director, Heart-Cancer-Stroke Program for the State of Maine (PL 89-239)

President, Regional Medical Program for the Upper Kennebec Valley, a pilot study

Governor, American College of Physicians for Maine

Maine has set an example for all ASIM component societies to try to emulate. The aims of the American Society of Internal Medicine and the internist it represents will be better served if effective liaison is established with leaders in all aspects of medicine. — **The Internist,** Dec. 68.

Craniofacial Neuralgias*

An Outline of Its Diagnosis and Management

Jose M. Rodriguez, M.D.

One of the most challenging problems that confront us during our everyday practice is the management of patients with severe recurrent pain of the head and face.

I believe that a brief outline of an up-to-date management of these conditions should be useful not only to the general practitioner, but also to the internist, general surgeon, otorhinolaryngologist, and ophthalmologist.

This is the main purpose of this paper.

Before going into the details of the different clinical entities that we are going to discuss, I would like to make a point that should always be kept in mind.

THE MOST IMPORTANT SINGLE FACTOR IN THE DIAGNOSIS OF THIS CONDITION IS A CAREFUL HISTORY OF THE CHARACTERISTICS OF THE PAIN AS DESCRIBED BY THE PATIENT. Because it is impossible to classify craniofacial neuralgias in any useful and practical manner, I am going to limit myself to a brief description of the diagnosis and treatment of the most important clinical entities.

Trigeminal Neuralgia – This is the better known and of most practical importance of all the craniofacial neuralgias.

The diagnosis is made by the clinical features which will be summarized below:

1. The pain is characteristic and consists of severe paroxysms of high intensity, short duration, shooting type of pain. Patients usually compare this to electric shock or knife like stabs.

   In between the attacks, the patient is free of pain.

2. The pain is always confined to the anatomical distribution of the fifth nerve. It is most common in the distribution of the second division or maxillary nerve and the third division or mandibular nerve. In less than 5%, it is also in the territory of the first division or ophthalmic nerve.

3. It is limited to one side of the face; and even in bilateral trigeminal neuralgia, the attacks of pain are limited to either side of the face at one time.

4. There is always a trigger point. Stimulation of this point brings on the attacks. The stimulation can be minimal, such as light touch, cold air, talking, or chewing.

5. Age distribution. This is much more common in older people, although it could start during middle age. It is rarely seen in young adults and children.

6. The course is intermittent and there can be long intervals during which the patient is free of pain. However it tends to worsen with age, and its spontaneous arrest is extremely rare.

7. There is no objective evidence of fifth nerve deficit. This is important in differential diagnosis of trigeminal neuralgia due to a tumor or vascular malformation involving the nerve.

Etiology – It is still obscure. Some of the etiological factors invoked by different authors are as follows:

1. Arterial compression at the pons.
2. Petrous ridge compression.
3. Degenerative process with short circuiting.
4. Central etiology.

Treatment –

1. Medical – Until recently there was not effective medical treatment of trigeminal neuralgia. Currently, we have two compounds which are effective in about 50% of the cases.

   The first compound used was diphenylhydantoin (Dilantin®). It is usually necessary to use 100 milligrams four times a day in order to control the attacks of pain. It is usually well tolerated, but some patients complain of ataxia. If after one week of treatment there has been no improvement, the drug should be discontinued as it will not be effective.

   The most recent compound available for treatment of this condition is carbamazepine (Tegretol®). It is available in 200 milligram tablets. Because it is a new compound, it is advisable to have a base line evaluation of the blood, liver, and kidney functions prior to institution of the therapy.

   It is also wise to start the treatment with small doses such as 100 milligrams twice a day and increase the drug by 100 milligrams daily until control of the symptoms has been reached or until toxic effects appear. Most patients obtain relief with 800 milligrams in twenty-four hours. If no relief has been obtained with that dosage, then the drug should be discontinued. At times, good effects are obtained with as little as 200 milligrams daily. The patient should be followed closely during the first months of treatment, and blood count, including platelet count, urinalysis, and liver function tests, should be done weekly during that time.

Surgical Treatment – If medical treatment is not effective, the next step is alcohol injection of the peripheral branches of the trigeminal nerve which corresponds with the trigger point. The injection has to be done under local anesthesia, and full cooperation from the patient is needed. When the alcohol is injected in the nerve substance, a relief for up to two years can be obtained.

* From the Thayer Hospital, Waterville, Maine 04901.

The next step, if there is recurrence of pain and the trigger point is limited to either distribution of the supraorbital or the infraorbital nerve, is a peripheral nerve avulsion. This can be carried out with good relief for another two or three years.

However, in elderly people in which the distribution of the pain appears to involve more than one division, the injection of the gasserian ganglia with boiling water is recommended. This procedure should be done under general anesthesia and under x-ray control. In competent hands, it appears to be effective for a longer period of time.

The standard procedure for a permanent cure of the pain of trigeminal neuralgia is retrogasserian rhizotomy. The major setback of this procedure is that the patient is left with complete anesthesia in the territory of the fibers sectioned. However, if the patient has been made aware of the anesthetic feeling by a previous peripheral nerve injection, he is usually very happy to exchange the pain for the numbness. In a very few cases, these patients may develop annoying paresthesia over the anesthetic area. This surgical procedure in competent hands has a very low mortality, practically zero; and the complications are few and rare.

The fifth nerve root can be approached through a temporal route either extradurally or intradurally or through the posterior fossa. The later being the procedure of choice when a cerebellopontine angle tumor or vascular malformation is suspected.

In order to avoid the anesthesia of the face, other procedures have been used. The most popular until now is the procedure of Taarnhoj in which the gasserian ganglia is decompressed by opening the cavum of Meckel. This operation is usually effective in relieving the pain, but the number of recurrences is high.

Also, some authors feel that mild trauma to the ganglia would produce similar results.

More recently, and with the help of the dissecting microscope, a subtemporal transtentorial approach has been used with only partial section of the root at the origin in the pons. This operation will most likely become the procedure of choice.

In cases of bilateral trigeminal neuralgia or when there is involvement only of the first division in a young patient, a bulbar trigeminal tractotomy could be done. This procedure would preserve sensation to touch and would assure the integrity of the motor root which innervates the masticatory muscles. However, this procedure is slightly more risky and could leave the patient with ataxia, as fibers of the spino-cerebellar and spinovestibular tracts are also sectioned.

In summary, trigeminal neuralgia should be easily diagnosed; and fortunately, we are in a position to control this painful condition.

If medical treatment has failed, the referral to a neurosurgeon should not be delayed.

Glossopharyngeal Neuralgia – This is a definite clinical entity with similar characteristics than trigeminal neuralgia, but with the trigger point in the distribution of the glossopharyngeal nerve.

This is a rare condition, about one case in every seventy of trigeminal neuralgia. It was unrecognized as a separate entity until 1920. The pain is severe and is felt on one side of the throat extending into the ear. It is usually precipitated by swallowing.

It could be associated with carotid sinus sensitivity manifested by syncope and convulsions.

The treatment of choice is intracranial section of the glossopharyngeal nerve and of the adjacent fibers of the vagus. This operation gives a permanent cure and is not followed by appreciable anesthesia or annoying paresthesia.

Geniculate Neuralgia – This entity was first described by Ramsay Hunt in 1907, in a case of herpes zoster which involved the auditory canal, the mastoid area, and the anterior two-thirds of the tongue. This corresponds to the somatic sensory fibers of the seventh nerve. In the so called "Ramsay Hunt Syndrome" there is an associated peripheral facial nerve palsy.

The geniculate neuralgia has a similar distribution as the Ramsay Hunt syndrome, but it is not accompanied by a herpetic eruption or facial palsy. The pain is paroxysmal, but lasting up to three hours. It is localized mostly in the ear, but may spread into the face and throat.

The treatment of choice would be intracranial section of the nerve of Wrisberg under local anesthesia.

Autonomic Facio-cephalalgia (Horton's Syndrome or Histamine Cephalgia) – This is another well defined entity and the diagnosis can be made clinically. Unfortunately, the treatment is much more difficult than trigeminal neuralgia.

The attacks are characterized by unilateral severe burning pain which lasts from a few minutes to a few hours and recurs with clock-like regularity. It is usually associated with secretory and vasomotor symptoms involving the eye and nose. There is usually tenderness over the carotid arteries in the neck. It is not accompanied by nausea which is a good differential diagnostic point in regard to migraine or other vascular headaches. The attacks come in clusters which could last for several weeks to several months and usually subside with no apparent reason only to return at a later date. Usually the attacks become of longer duration and more frequent as time goes by.

There is no treatment that is consistently effective.

Medical Treatment – Histamine desensitization has been tried with some good results.

Surgical treatment has been directed to denervation and section of the external carotid artery, neurectomy of the petrosal and vidian nerves and also to the sphenopalatine ganglia. Although there have been many reports in literature of cure of this condition, an optimism usually follows each new procedure; the long range results leave much to be desired.

Sphenopalatine Ganglion Neuralgia (Petrosal Neuralgia) – This is similar to the previously described and

most likely represents the same entity. The attacks can be controlled by cocainization of the posterior and upper part of the middle turbinate. If this is repeatedly effective in controlling the attack, an alcohol injection or surgical removal of the sphenopalatine ganglia is indicated.

Post Herpetic Neuralgia – This terrible condition occasionally follows a herpes zoster involving the trigeminal nerve distribution. It is usually located over the first division and consists of severe constant burning pain over the eye and forehead with repeated attacks of shooting pain.

There is not consistent effective treatment for this condition. Multiple surgical procedures have been advised and abandoned. In a few cases removal of the herpetic skin and/or avulsion of the supraorbital nerve has been effective. Retrogasserian rhizotomy is not advisable.

In my own experience, I have found that a few patients can be helped with high doses of an antidepressant such as imipramine (Tofranil®). It is worth mentioning that this compound is chemically related to carbamazepine (Tegretol).

Atypical Facial Neuralgia (Prosopalgia) – This is characterized by a constant, nagging pain which is described as being deep in the face without definite localization. The physio-pathology of this pain has not been explained although it is considered to be on a psychosomatic basis. There is not effective treatment known for this condition. Antidepressants and tranquilizers can be tried.

Occipital Neuralgia – This condition is common and is usually secondary to trauma to the cervical muscles or cervical spine. It is characterized by severe shooting pain in the distribution of the occipital nerve usually followed by occipital headaches.

The physio-pathology is due to compression and/or irritation of the occipital nerve where it perforates the fascia together with the occipital artery and vein. It is commonly seen following the so called "whip-lash" type of injury to the neck. The diagnosis is made by reproduction of the symptoms by compression of the occipital nerve with the fingers. It is confirmed by local infiltration of novocaine which should elicit anesthesia in the territory of the occipital nerve with complete control of the symptoms.

The treatment should be at first conservative using muscle relaxants, analgesics, cervical traction, and local infiltration of the occipital nerve with novocaine and corticosteroids. Surgical treatment consists of avulsion of the nerve which is done under general anesthesia. Prior to surgical treatment, the possibility of cervical disc protrusion and malignancy of the cervical spine should be ruled out. Following surgery, the patient is left with an area of anesthesia in the territory of the occipital nerve which is usually well tolerated. The patient is happy to pay that price for control of the pain.

Some of the conditions that I should mention as differential diagnosis for craniofacial neuralgias are the following:

1. Temporal and masseter myositis. In this case, the pain is more constant and has not the characteristic of neuralgia. It is made worse by chewing and eating. Usually by deep palpation a myositic node can be found. The treatment is with deep massage and local injection of novocaine and corticosteroids.
2. Temporomandibular or Costen syndrome is due to chronic inflammation of the temporomandibular joint secondary either to trauma or to a malaligned bite. Treatment consists in correction of the bite and injection of novocaine and corticosteroids in the temporomandibular joint.
3. Temporal arteritis. This entity usually occurs in older people and the symptoms are characterized by severe headaches and evidence of an inflammatory reaction of the temporal arteries. It is usually accompanied by involvement of other arteries of the body including the retinal arteries.

   Treatment consists of use of corticosteroids and removal of the diseased segment of the temporal artery.
4. Acute glaucoma which could give severe pain in the eye and the head is diagnosed by the ophthalmological changes.
5. Vascular headaches and migrains are usually familial. They come in attacks that might last for a few hours to several days, and they are accompanied by nausea and vomiting and vasomotor changes.

In summary, the diagnosis of trigeminal and of glossopharyngeal neuralgia should be easily made during the first visit by the patient and should be treated effectively as soon as possible.

The autonomic faciocephalalgia and occipital neuralgias should also be recognized although the differential diagnosis and treatment present more of a problem for the specialist.

The other conditions represent mostly a background for differential diagnosis.

It is my hope that this paper will help the Maine practitioner to recognize these entities and manage them accordingly.

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Senra del Valle and his associates[1] conducted a study of 477 children with diarrhea, most of whom were hospitalized with the disorder. Lomotil, used in 407 of the children, shortened the duration of the diarrhea.

Grinszpan, Goldstein and Divito[2] used Lomotil in 20 children with diarrhea and also reported a prompt disappearance of diarrhea. Harris and Beveridge[3] in a double-blind study of 50 children with diarrhea, however, found no clear pattern to suggest that Lomotil influenced the course of the condition.

Michener, Brown and Turnbull[4] added evidence supporting the beneficial effects of Lomotil in 80 children, concluding that Lomotil was highly useful in controlling abdominal cramping, diarrhea and hypermotility.

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Adults: . . . . 2 tsp. 5 times daily (20 mg.) or 2 tablets q.i.d.

*Based on 4 cc. per teaspoonful.

Maintenance dosage may be as low as one-fourth the initial daily dosage.

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A Rational Approach to Allergy of the Ear, Nose and Throat*

SAMSON FISHER, M.D.

A subtitle to this paper could be, "Why Doesn't the Patient Get Well?" The contention is, of course, that a lot of ear, nose and throat patients do not get well because there is a significant allergy factor to their disease, that is unrecognized, or ignored or inadequately treated. An allergy work-up may be a formidable undertaking, and treatment is often difficult. So, there may be a reluctance and resistance on the part of some physicians and some patients about getting "involved."

Every practitioner should develop an attitude towards allergy. Whether they do or do not become "involved" depends on their attitude; and their attitude is determined by their understanding of allergy problems and their familiarity with the appropriate way to handle them.

The approach to the allergy aspects of ear, nose and throat disease requires the identification of the patient and the development of a treatment program for him. At this point, it is necessary to accept three premises:

1. An appreciable number of patients who come to an otolaryngologist with chronic disease have a significant allergy problem.
2. That with proper study, the things to which they are allergic can be identified.
3. That with appropriate specific treatment, the course of the disease will be favorably influenced.

The question: "Who Are The Patients?" can best be approached by trying to identify the prototype allergy patient with classical allergy signs and symptoms. Typical findings could include:

1. Seasonal rhinitis, specifically hay fever.
2. The patient is bothered in situations of known exposure, such as mowing the lawn.
3. He has a clear, glary or watery nasal discharge.
4. Itchy eyes and nose.
5. Sneezing spasms.
6. A good response to antihistamines.
7. A strong family history of allergy.
8. Pale, gray, or bluish edema of the nasal mucus membrane.
9. Many eosinophiles in the nasal mucus and in the peripheral blood.[1]
10. Strong reactions to allergy skin tests.

This inventory is intended to emphasize a few points:

1. The first seven items are information easily obtained from the history.
2. Each of these items is almost pathognomonic, and any one isolated finding is often enough to make a diagnosis of allergy.
3. Skin tests are at the bottom of the list. The implication is that the diagnosis is made on the basis of the history and the physical findings, not the skin tests.
4. With only a little modification, all the clues to allergy may be lost:

With the natural development of allergic disease, the pollen sensitive patient may become house dust sensitive. He will then have perennial symptoms; and the intermittency of symptoms, and correlation with the pollen seasons disappears. Many patients develop symptoms several hours after exposure, symptoms may persist unabated until the next exposure, and every exposure may not produce symptoms. Therefore, the patient may have no basis for associating his symptoms with exposure to a specific allergenic factor. Frequently there is obstructing edema but no discharge. Witness the child who blows and blows and can never blow anything out. In fact there may be neither edema nor symptomatic mucus discharge. Often there is no itching or sneezing. Antihistamines, when effective, are of diagnostic significance. Frequently, of course, they are ineffective. This is particularly true of the selected group seen by the allergist. Patients who get satisfactory relief with antihistamines are not likely to pursue the matter further. A family history is often lacking. The mucus membrane may not have a typical appearance because of minimum local reaction, or the appearance may more likely be altered by infection and other irritants. Eosinophilia, both in the mucus and peripheral blood may be lacking. A small percentage of typical hay fever patients may have negative skin tests. Positive tests, however strongly positive they may be, are significant only if they correlate with the clinical picture.

It is evident that the typical allergy patient with only a little alteration may never find his identity as an allergic individual.

Basically three types of patients are encountered.

1. The patient with definite and obvious allergy, and allergy is his major problem.
2. Second is the patient with fairly definite or probable allergy; but the major disease process is something else, and it is this something else which preoccupies the patients' and the physicians' attention.
3. The third group includes those patients with "possible" allergy. If you subtract one by one some of the symptoms itemized in the category of definite allergy, you arrive at the patient with fewer or milder allergy symptoms. And if you continue subtracting symptoms down to a very few or none, you arrive at the patient with "possible" allergy, and this is the third category.

*From the Thayer Hospital, Waterville, Maine 04901.

Why are the "possibles" with a dearth of allergy symptoms included at all? Because experience has shown that when a patient does not get well, there is very often some underlying or complicating disease. Where there is involvement of the upper respiratory mucus membrane, a routine work-up should include an allergy evaluation. Even in the absence of a significant allergy history, allergy must be considered.

These then are the patients, and these are their problems:

1. The chronic stuffy nose.[2]
2. Chronic sinusitis.
3. Copious postnasal discharge.
4. Chronic mouth breathing.
5. Mouth breathing, with adenoidal facies, vaulted palate, and pointed maxillary arch.
6. Intermittent or recurrent impaired hearing, tinnitus or hoarseness.
7. Serous otitis media.[3]
8. Chronic purulent otitis media with a central perforation.
9. Tympanic membranes with equalizing tubes.
10. A repetition of two or three adenoidectomies.
11. The headachy type with cluster headaches, histamine headaches, tension headaches, migraine headaches, or just head pain. The descriptive adjective adds very little to the understanding of the mechanism of the headache.[4]

This inventory is not intended to identify the type of patients seen in an otolaryngology practice. These are patients who, because the lay public has become so medically sophisticated, are coming directly to an allergist's office for allergy evaluation. This documentation of patients is intended to emphasize the extent to which allergy and otolaryngology overlap.

The second part of the problem is: What To Do With Them?

It is important at this point to restate a few simple facts. Allergy is a genetic, constitutional disease. There is no reason to believe that patients will outgrow what is their genetic inheritance. There is no definitive, curative therapy any more than there is in diabetes or pernicious anemia. Adequate treatment or management may mean following a prolonged and demanding regimen. Intensive treatment may be rewarded by small gains, or maybe only by retarding the progress of the basic disease.

There are several considerations that should influence the approach to the management of the three categories of patients outlined. At the risk of oversimplifying, there are four clinical features that may help set the right course. These may be classified as:

1. Patients easy to treat.
2. The patients who are hard to treat.
3. Conditions in which there is some urgency.
4. Where there is no urgency.

The clinical problem can be:

1. Easy to treat. There is a favorable response to antihistamines or to simple elimination procedures, such as getting rid of a feather pillow, changing the brand of perfume, eliminating chocolate from the diet, etc.
2. Hard to treat patients are those who are unresponsive to anything less than an intensive allergy regimen.
3. Urgent would imply that the patient is very uncomfortable, there is a high morbidity, and disability. It is surprising the amount of disability encountered. In this context, disability refers to the child who does poorly in school, or the hay fever patient who cannot sleep at night, or the housewife who has difficulty doing dusty housework or indulging her hobbies of knitting or hooking rugs, or a farmer who cannot farm. Actually there may be considerable absenteeism from work and from school.

The outline of three treatment programs are:

1. Simple treatment, consisting of antihistamines and or simple elimination procedures. There is no correlation between the severity of symptoms and the amount of treatment that may be required to obtain relief.
2. A trial of treatment. This would include antihistamines and other drugs. Elimination procedures limited to the bedroom, and directed at house dust, animals, animal hair materials, wool, feathers, and scents. Avoidance of non-specific irritants. A trial allergy elimination diet for a few weeks. All this may extend over a month or two.
3. A prolonged course of intensive treatment. This might include more drugs such as antibiotics and steroids. Elimination procedures as noted above, but extended to include the whole house. More careful avoidance of non-specific irritants, and this may be extended to include occupational exposure. Allergy vaccine, usually for house dust, pollens, and molds.

If it is possible to fit the patient into a clinical pattern guided by the suggested classifications outlined, it may then become clearer what course of treatment is indicated.

As an example, consider the prototype hay fever patient with many typical symptoms. If he gets adequate relief on a simple treatment program with moderate doses of a well tolerated antihistamine, is this good enough? In certain situations, this may be grossly inadequate treatment. If a detailed personal history is taken, it may become evident that the patient has asthma or bronchitis, he wheezes or is short of breath, or has a productive cough, etc. In other words, he may have what is certainly more serious allergy disease than the rhinitis. It is this which should demand attention, although it is the rhinitis that causes discomfort, and for which he is seeking relief. There may be a past history of atopic eczema in infancy, an infant feeding problem, or croup; or there may be a family history of asthma in older siblings. All of this is indicative of a strong tendency to

develop increasingly severe disease. It would then appear to be important to carry out intensive prophylactic measures to prevent further development of the allergic disease. The allergist believes that it may be important to control completely all evidence of the disease if possible, on the premise that if this is done, there is less likelihood of developing new allergic diseases or more serious symptoms.

In the case of the patient cited, there is some urgency, and relieving his acute symptoms only, is not good treatment.

In similar cases without the disturbing personal or family history, it is appropriate to be satisfied with symptomatic relief obtained with a minimum of therapy. But there too, one reservation should be made. It is important to advise a patient that he has an allergic disease. In these days, the use of many therapeutic drugs, vaccines, and contrast media are contraindicated in allergics. The patient and his family physician have a right to know what he has. The patient may have some other unrelated obscure disease. A diagnosis of allergy could be one important clue.

Patients in categories two and three who are easy to treat are no problem. With patients who are hard to treat, the presence or absence of any urgent features may be the deciding factor. Without any urgency, be wary of prescribing a treatment program that is worse than the disease. On the other hand, with only a little urgency, these categories will be found to include patients who for personal reasons are very persistent in trying to obtain relief. They are the ones who may accept many surgical procedures such as a submucous resection, then a surgical procedure for a spur, repeat adenoidectomies, repeat polypectomies, modification of the antral windows, and something else for the large turbinates. The decision as to treatment is very often a response to the patient's demands; but the type of treatment rendered is the physician's decision.

To be specific, where there is no urgency, the patient who is unresponsive to simple measures may very well be left alone, after the physician goes through the formality of explaining the condition and the reason for this decision. This is the type of patient with annoying, but not uncomfortable symptoms. This may be a patient with chronic hoarseness who is concerned about the cause but unconcerned about treatment for a benign condition. Or it may be a patient with mild rhinitis who would be agreeable about eliminating many things or food; but who chooses to keep a household pet at the expense of continued symptoms.

If there is some urgency, then a few weeks trial of treatment can be carried out, and further treatment would depend on the response. If the response is favorable and encouraging, then embark on a long term program of intensive treatment. Regardless of the response, if it is quite definite that there is significant allergy disease, start long term treatment. This decision is a matter of experience and judgment. In general, persistent treatment may be indicated for patients with "definite" or "probable" allergic disease; while a trial of treatment may be all that is justified for a "possible" allergic patient. When in doubt, a course of steroid therapy may clarify the problem, by making it evident that whatever the pathology, it is or is not readily reversible.

In a course of long term intensive treatment an effort should be made to treat any aspect of the disease complex that may be susceptible to treatment. Allergy disease is often treated in fragments. For instance in a patient with perennial symptoms, you might prescribe a course of pollen vaccine on the assumption that whoever has persistent summer symptoms, has them because of an allergy to pollens, in addition to whatever else he may have. The philosophy of treatment is that as you identify, attack, and hopefully relieve one aspect of the disease after another, more and more will the primary disease come under control. A guiding principle in allergy treatment is to make an effort to reduce the total allergy load, to the point where the patient can handle what remains.

Conclusion

There is a great deal of overlap in otolaryngology and allergy. The allergy patient may have classical allergy symptoms in abundance, or such symptoms may be completely lacking. Some allergic patients are fortunately easy to treat, and many obviously are hard to treat. How you handle these various patients depends on the strength of your conviction that they do or do not have allergy disease, and whether there is a degree of urgency that compels you to follow a prolonged course of intensive treatment.

If it appears that the allergic approach to ear, nose and throat disease is tenuous and vague, it should be noted that these are chronic problems because the disease mechanism is tenuous and vague, and the results of surgical and manipulative treatment often leave much to be desired. In a complex ear, nose and throat disease problem, the mechanism of which could involve factors of edema and increased secretions; or where medical and surgical treatment has been unsuccessfully directed at infection in one of the hollow chambers; or where mucus membrane is producing mechanical obstruction; then the patient who is not getting well deserves an allergy evaluation.

References

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3. McGovern, J. P., et al, Allergy and Secretory Otitis Media, JAMA 200:134, April 10, 1967.
4. Fisher, S., A Rational Approach to Allergic Headaches, JAMA, 43-36, Feb., 1952.

15 College Ave., Waterville, Maine 04901.

X-Ray of the Month – No. 2*

This product of a 35-week gestation and weighing 4 plus pounds, was born with an Apgar of one. The baby died shortly after and on examination it was felt that the skull was soft and the extremities hypoplastic.



OSTEOGENESIS IMPERFECTA

This is a hereditary disease transmitted by a dominant gene with variable expressivity. It has historically been sub-divided into a congenita and tarda variety with the former represented by this month's case which is the severest form of the disease. Osteogenesis Imperfecta has been classified by Rubin as a diaphyseal dysplasia and is basically an inability to form normal bone matrix in the face of normal cartilage proliferation. There is a failure of normal periosteal and endosteal osteoblastic activity which in its severest form results in multiple fractures. It is the recurrent fractures that results in any stunting that accompanies this disease.

The severe congenita variety may be recognized in utero and the fetus is often stillborn. Many forms are accompanied by blue sclerae and deafness. The least severe form may be manifested only as osteoporosis. Radiographically, the bony cortex is thin and the medullary canal is widened. The spongiosa has scanty trabeculae and the bone is striated or cystic in appearance. The trabeculae are arranged in the direction of stress and rearranged secondary to fracture deformities. The vertebral bodies have a bi-concave appearance and the pelvis may show some degree of protrusio acetabuli. The cranial vault appears thinned and there is often some bilateral temporal bulge.

Early in life the cranial vault has a Mosaic pattern of multiple wormian bones. Later in life the skull may have a more normal appearance, although the paranasal sinuses may be excessively voluminous. Intelligence is considered normal but there is associated muscular laxity.

*From the Department of Radiology, Maine Medical Center, Portland, Maine 04102.

DEAN H. FISHER, M.D.
COMMISSIONER

State Of Maine

Department of Health and Welfare

Maine State Comprehensive Infant Immunization Surveillance Program

JAMES S. NORTHCOTE, JR.*

The goal of the Maine State Comprehensive Immunization Program is to achieve as rapidly as possible the immunization of all susceptibles against polio, diphtheria, pertussis, tetanus, measles, smallpox, and other diseases that vaccines become available for, and to maintain this high level of immunity through ongoing immunization programs.

One of the methods used by the State in achieving this goal is the Comprehensive Infant Immunization Surveillance Program which intends to provide follow-up on every live birth in the state with the aim of achieving virtually 100% immunization for our newborn population.

Originally, the State of Maine inaugurated this Infant Immunization Program in February, 1967. Since that time the original program has undergone extensive program revision and simplification. Through trial and error we arrived at this present program which may, in turn, need to be further modified. The initial program presented several problems: the mailout cards were too complex; the language used was too technical for the average parent; the timing of mailouts was poor and overlapped, causing much confusion. As a result, we received only 7% response from the mailings. Now, after redesigning and rewording the cards and letters, retiming the mailouts, and conducting several trial mailings, we have produced what we hope is a better format.

The goals of the Infant Immunization Surveillance Program are three: viz., to inform, gain information and collect data.

Utilizing a series of mailouts, cards, and letters, the Infant Immunization Surveillance Program hopes to make known to the parents of children that good, safe, reliable, and inexpensive vaccine is available and on the market. We hope to inform parents of all newborns the importance of early immunization, and to encourage these parents to seek immunization for their children as soon as possible. The program also hopes to gain information concerning the numbers of children immunized or not properly immunized, and to use this information as an index of suspicion for potential epidemic situations. Also, we plan to begin collecting health data concerning the children of the state with the hope that this data will eventually be helpful in determining the health status of the entire state, and indicate trends of infectious diseases.

The method of operation is as follows: As births are recorded at the State Office of Research and Vital Statistics, a data processing punch card related to the newborn and his parents is prepared for internal use. This card and the birth certificate are utilized by the Data Processing Card Preparation Unit in preparing additional punch cards necessary for the operation of the computer program. Illegitimate births and births to nonresidents are immediately deleted and referred to the proper agencies. Infant deaths are eliminated as the death is recorded.

When the child is *three months* of age, all relevant data is recorded on computer tape. All mailings are directly addressed by an IBM 360 computer. At this time, a card is sent to the parents of the newborn congratulating them on the birth of their child. Included on this card is a recommended basic immunization schedule. This immunization schedule is the basic immunization schedule recommended by the Public Health Service Advisory Committee on Immunization Practices. Private physicians may elect to use or recommend immunization schedules which are different from the one we have suggested, based on individual child requirements and changing medical knowledge. The Maine Department of Health and Welfare is preparing a revised immunization schedule which will be mailed out to all physicians in the state on or about December 1, 1968.

A second letter is sent to the parents of all newborns at the time the child reaches *seven months* of age. Ac-

*Director, Immunization Program.

companying this letter will be the initial questionnaire card that is designed to determine the child's immunization status with regard to poliomyelitis, diphtheria, pertussis, and tetanus. This card is in the form of a business reply postal card.

A follow-up letter and questionnaire card will be sent out to parents who fail to respond to the initial card. This follow-up letter and questionnaire card are sent out at or about the child's ninth month of age.

Field visits to parents who fail to respond by mail will be performed by public health nurses and personnel from the State Immunization Program. Field follow-up activities will commence at or about the child's eleventh month of age. The field workers will collect data on the child's immunization status, motivate the parents to seek more complete protection for all members of the family, and make referrals to family physicians, immunization clinics, or well child conferences.

At *thirteen months* of age, a second letter will be sent to the parents of the child stressing the need for measles and smallpox immunizations, as well as a second questionnaire, designed to determine the child's immunization status relative to these diseases. We are aware of the fact that many physicians defer smallpox vaccination until later than fourteen months of age. We are unaware, however, of how many children are cared for by these physicians, and to what extent this practice affects the overall immunization practice in the state. Should we learn from the mailout returns and the field visits that this is a major factor then this second mailout may be delayed.

A follow-up letter and questionnaire card will be sent to parents who fail to respond to this mailing at fourteen months of age. Field visits will commence for nonrespondents at the child's fifteenth month of age.

Files of punch cards, computer tapes and statistical print-outs, and other records will be maintained at the Central Office in Augusta for a period of not less than three years, and will be utilized on a continuing basis as an aid in the evaluation of program progress. Moreover, this program does not constitute an individual case record system. Records of individuals will not be maintained but the data which is collected will be tabulated and recorded in the form of overall levels of immunization coverage. Therefore, parents should be encouraged to keep accurate immunization records on their children.

SUMMARY

We hope that the Comprehensive Infant Immunization Surveillance Public will: Motivate parents to seek early immunizations for their newborns, and booster doses for themselves and their older children.

Act as a data gathering device for planning.

We realize the data being gathered is crude, but it is the best we have at this time. The present level of sophistication has been arrived at with considerable effort. When sufficient data is accumulated, then perhaps more sophisticated studies can be conducted.

Three Important International Meetings

New York City – 1969

MAY 29-JUNE 1 — The Third Triennial Congress On Medical and Related Aspects Of Motor Vehicle Accidents

JUNE 2 — The International Conference On Drug Abuse

JUNE 3-4 — The International Conference On Poison Control

Conducted respectively by the International Association for Accident and Traffic Medicine, The Committee for the International Conference on Drug Abuse, and The American and European Associations of Poison Control Centers.

Maine Heart Association Notes

20 Winter Street, Augusta, Maine

Prevention of Coronary Heart Disease
Official Recommendations From Scandinavia

While debate continues in the United States as to what to advise the public about dietary modification in efforts to prevent coronary heart disease, the Medical Boards of Norway, Sweden and Finland have presented their conclusions in a collective recommendation released . . . on May 3, 1968.

. . . After a brief review of dietary changes in the twentieth century, the effects on the serum cholesterol level of dietary fat and cholesterol, and the relationship to atherosclerosis, the statement reads: "If we want to prevent the disease by means of a special diet, it should be introduced at an early stage and the change of diet should apply to the whole population. . . .

"First and foremost this re-arrangement should bring about a decrease in the consumption of foodstuffs containing a large quantity of fat and/or sugar. . . .

"The practical consequences of what has been said above mean:

"The supply of calories in the diet should . . . be reduced to prevent overweight.

"The total consumption of fat should be reduced from 40% . . . to between 25% and 35% of the total calories.

"The use of saturated fat should be reduced and the consumption of polyunsaturated fats should be increased simultaneously.

"The consumption of sugar and products containing sugar should be reduced.

"The consumption of vegetables, fruit, potatoes, skimmed milk, fish, lean meat and cereal products should be increased.

"From the medical and nutritional standpoint the importance of taking regular exercise from an early age . . . should also be emphasized."

In evaluating this statement it is necessary to realize the high authority of the Medical Boards of the Scandinavian countries. . . . A collective recommendation from them deserves attention.

Here in the United States many experts are increasingly insistent that such advice . . . should be urged on the general public. But our government agencies . . . and our medical and health organizations have temporized by making it a responsibility of the individual physician to decide upon dietary prescription for the individual patient. With a substantial fraction of the adult population at risk of premature coronary heart disease, this stipulation essentially prevents any effective public health action.

Submitted by Jacob B. Dana, M.D., President, Maine Heart Association.
Reference: Keys, Ancel; Editorial; Circulation; Vol. 38, pages 227-228, 1968.

AMERICAN CANCER SOCIETY - MAINE DIVISION, INC.

Brunswick, Maine

Colon-Rectum Cancer to be Studied

NEW YORK, N.Y. — The American Cancer Society's National Board authorized a major national study project of colon and rectum cancer at a meeting in the Waldorf-Astoria recently.

According to the director of the study, Dr. E. Cuyler Hammond, ACS vice president for Epidemiology and Statistics, colon-rectum cancer is the most important single type of cancer in the United States today. In incidence — the number of new cases per year — it is second only to skin cancer. As a cause of death it is second only to lung cancer.

Recognition of the significance of colon-rectum cancer as a national problem is not new. However, it continues to grow in severity because so little information has been available about it, consequently it has not been possible to stimulate epidemiologists and other scientists to work on the problem.

The difficulty of conducting epidemiological research on colon-rectum cancer — another barrier to progress against it — has been complicated by the lack of any "leads," or reasonably plausible hypotheses to investigate.

In spite of the difficulties, however, the ACS has determined that colon-rectum cancer is such a serious problem that a great effort is to be made to solve it.

The study design will involve three major inter-related elements: a review of all pertinent literature (scientific reports) published to date, and from this date on; and involvement of well-qualified epidemiologists and other scientists from this country and abroad, holding meetings, and the development of an active dialogue among all those involved in dealing with colon-rectum cancer.

Secondly, data will be used from the Cancer Prevention Study — a national epidemiological study initiated in 1959 in which more than one million people were interviewed, rechecked every two years, and traced for six years. The preparation of computer tapes for the analysis of morbidity and mortality rates among these subjects has now been completed and is available for study.

The third element, and principal new aspect of the study will involve a complex and detailed program of microscopic examination, at autopsy, of the colon and rectum tissue of some 4,500 persons who die in a large number of hospitals. The examinations will not be limited only to persons who die of cancer, but all causes of death.

The immediate survivors of the deceased will be interviewed in depth about family history, past diseases, exposures — such as cigarette smoking, occupational hazards including working with asbestos, etc. — and various habits of each of the subjects. Information will also be obtained from hospital records. None of the subjects will in any way be identified in the study report.

A major part of the five-year time schedule will be taken up by the preservation and pathological examination of the colon-rectum tissue collected at autopsy. Dr. Oscar Auerbach, pathologist at the East Orange, New Jersey Veterans Administration Hospital will be the co-investigator for this phase of the study.

Dr. Hammond believes that it will require at least five years to collect the material for the autopsy part of the study.

An adjunct phase of the study will involve the entire United States membership of the International Association of Heat and Frost Insulators and Asbestos Workers — AFL-CIO. Dr. Hammond, Dr. Irving Selikoff, and colleagues conducted an epidemiological study several years ago of a small group of asbestos workers — members of the New York and New Jersey locals, on the effects of occupational exposure to asbestos dust, and found an unexpectedly high death rate of colon-rectum cancer among them.

The small numbers of individuals involved precluded drawing of firm conclusions about cause and effect, Dr. Hammond reports, adding that if those preliminary findings are substantiated, "then we will investigate the possibility that asbestos dust can act as a co-agent with some other factors in the etiology of colon-rectum cancer."

When completed, it should provide valuable, usable information about the nature of the development and spread of cancer of the colon-rectum and provide valuable information for use in prevention and early, effective treatment of this number one cancer problem in the United States.

American Cancer Society News Service Release.

A BLUE SHIELD REPORT to DOCTORS



REPORT # 21

Companion Plan Claim and Procedure Numbers

In order to improve the Companion Plan Blue Shield processing procedure it would be greatly appreciated if the scheduled procedure number is indicated on the Medicare Explanation of Benefits adjacent to the respective charges whenever the charges are not specifically identified by the "Medicare Office."

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County Society Notes

HANCOCK

A meeting of the Hancock County Medical Society was held at the Blue Hill Inn in Blue Hill, Maine on November 13, 1968 with ten doctors and four guests present.

Robert F. Russell, M.D. reported the acceptance of the usual customary and reasonable fee program by the Blue Shield. He noted that Niles L. Perkins, M.D. of Bowdoinham had presented the comprehensive health care plan, which will affect the practice of medicine in the State of Maine but no detailed report was given. Dr. Russell also noted that health care for the Indians was badly in need of help by physicians of the State and recommended voluntary efforts. A committee was to be formed to study needs and make recommendations.

There was a vote favoring the A.M.A. Rural Emergency Medical Services plan after discussion.

A letter from George G. Fuller, M.D., Chief of Staff of the Maine Coast Memorial Hospital, addressed to the President of the Hancock County Medical Society, John D. McIntyre, M.D., announced that there was no more Eleanor Widener Dixon Clinic and that the hospital staff was open to those who wished to apply for membership.

Morris A. Lambdin, M.D. discussed the force of shaping medical care in Maine at length. He recommended an accident handbook from the Children's Hospital Medical Center of Boston for distribution by the Hancock County Medical Society to families with young children. The Society voted to order copies for all interested physicians of the County.

Edward J. Palmer, M.D. of Castine addressed the meeting on Diagnostic Techniques in Neurology. His remarks were followed by a lively discussion by physicians and their wives of the informative and stimulating exposition.

The Hancock County Medical Society met on December 11, 1968 at the Brookside Restaurant in Ellsworth, Maine with sixteen members and nine guests present.

Llewellyn W. Cooper, M.D. was appointed to fill the vacancy from Hancock County on the Maine Medical Association's Health Insurance Committee.

George J. Robertson, M.D. of Boston, Massachusetts was announced as the guest speaker for the January 8th meeting to explain the Guest Resident Program. Associated with this announcement, there was a motion by Eliot T. Stadler, M.D. that the Society's President appoint a permanent committee on Postgraduate Medical Education for the County Society to coordinate and administer the activities of the hospitals and doctors within the County; this was approved.

Robert F. Russell, M.D. said that he would write to Dr. Thompson of the Children's Bureau in Washington to establish the status of the Maternal and Infant Care Program in the County. Morris A. Lambdin, M.D. said he did not know about the official status.

The nominating committee reported the following slate of officers for 1969:

President, Winston G. Stewart, M.D., Bar Harbor
Vice President, Randall H. Silver, M.D., Ellsworth
Secretary, Bradley E. Brownlow, M.D., Blue Hill
Delegates to the M.M.A. House of Delegates, Drs. Eliot T. Stadler, West Gouldsboro and Charles H. Knickerbocker, Bar Harbor. Alternates, Drs. Phillip L. Gray, Blue Hill and John D. McIntyre, Ellsworth.
Censors, Drs. Robert C. Granger, Blue Hill (3 yrs.), Walton P. C. Clason, Ellsworth (2 yrs.) and Robert F. Russell, Penobscot (1 yr.).

Wesley J. English, M.D. was elected to membership in the County Society. Dr. Russell introduced a resolution for the House of Delegates of the Maine Medical Association to allow

jury duty to physicians. This resolution was placed with the Secretary for further information.

The speakers of the evening were Drs. Bradley E. Brownlow and Llewellyn W. Cooper, explaining their Goodwill Tour with People-to-People Organization in Eastern and Western Europe, September and October 1968. The talk was illustrated with an excellent color movie made by Dr. Cooper. The talk centered around the visit to physicians and medical activities in Europe.

BRADLEY E. BROWNLOW, M.D., *Secretary*

LINCOLN-SAGADAHOC

A meeting of the Lincoln-Sagadahoc County Medical Society was held at The Ledges in Wiscasset, Maine on December 17, 1968 with seventeen members and one guest present. The meeting was called to order by the President, Mary J. Tracy, M.D.

Anthony J. Keating, M.D. and James O. Smith, M.D. were elected to active membership in the County Society.

John F. Andrews, M.D. reported on the last meeting of the Council of the Maine Medical Association. Election of the President-elect of the Maine Medical Association will take place on Sunday, June 15, 1969 immediately following the Second Meeting of the House of Delegates at the Samoset, Rockland, Maine.

Antihistamines and some other drugs may be taken from over-the-counter list if present proposed legislation is passed. A request for MEMPAC dues will arrive along with the M.M.A. dues notice.

Dr. Tracy appointed the following nominating committee: Drs. Carl R. Griffin Jr., Chairman, Alfred T. Holt and Alan W. Zeller.

Dr. Holt introduced the speaker, John R. Lincoln, M.D. of Portland, who spoke on brachial plexus stretch phenomena and paralytic brachial neuritis.

GEORGE W. BOSTWICK, M.D., *Secretary*

Tuberculosis? Influenza?
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News, Notes and Announcements

Department of Health and Welfare
Division of Maternal and Child Health
Including Services for Crippled Children

(By Appointment Only)

Orthopedic Clinics

Augusta – Augusta General Hospital
1:00 p.m.; Apr. 17
Bangor – St. Joseph Hospital
9:00 a.m. and 1:00 p.m.: Mar. 27, May 22
Half-day sessions: 1:00 p.m.: Apr. 24, June 26
Ellsworth – Maine Coast Memorial Hospital
9:00 a.m.: Mar. 20, June 19
Fort Fairfield – Community General Hospital
9:00 a.m. and 12:30 p.m.: Mar. 10, May 12
Fort Kent – Peoples Benevolent Hospital
9:00 a.m.: Mar. 11, May 13
Houlton – Aroostook General Hospital
9:00 a.m.: Mar. 13, May 15
Lewiston – Central Maine General Hospital
9:00 a.m. and Bracing Clinic 12:30 p.m.: Mar. 21, Apr. 18, May 16, June 20
Machias – Down East Community Hospital
9:00 a.m.: May 23
Portland – Maine Medical Center
10:30 a.m.: Mar. 3, 10, 17, 24, 31, Apr. 7, 14, 21, 28, May 5, 12, 19, 26, June 2, 9, 16, 23, 30
Presque Isle – Arthur R. Gould Memorial Hospital
9:00 a.m.: Mar. 12, May 14
Waterville – Thayer Hospital
Times to be staggered: Mar. 26, Apr. 23, May 28, June 25

Cardiac Clinics

Bangor – St. Joseph Hospital
9:00 a.m.: Mar. 14, 28, Apr. 11, 25, May 9, 23, June 13, 27
Portland – Maine Medical Center
9:00 a.m.: Mar. 7, 14, 21, 28, Apr. 4, 11, 18, 25, May 2, 9, 16, 23, June 6, 13, 20, 27

Pediatric Clinics

Bangor – St. Joseph Hospital
1:30 p.m.: Mar. 28, Apr. 25, May 23, June 27
Ellsworth – Maine Coast Memorial Hospital
9:00 a.m.: Mar. 28, Apr. 25, June 27
Fort Kent – Peoples Benevolent Hospital
10:00 a.m.: Mar. 26, June 25
Houlton – Madigan Memorial Hospital
1:30 p.m.: Apr. 9
Machias – Down East Community Hospital
9:00 a.m.: Apr. 18
Presque Isle – Arthur R. Gould Memorial Hospital
1:30 p.m.: Mar. 18, Apr. 15, May 20, 28, June 17
Waterville – Thayer Hospital
Times to be staggered: Mar. 12, Apr. 9, May 14, June 11

Cleft Palate Clinic

Portland – Maine Medical Center
10:00 a.m.: May 13

Clinics for Mentally Retarded Preschool Children

Waterville – Thayer Hospital
9:00 a.m.: Mar. 5, 19, Apr. 2, 16, 30, May 7, 21, June 4, 18

Lewiston – Central Maine General Hospital
St. Mary's General Hospital
(1st clinic at CMGH; 2nd clinic at St. Mary's)
9:00 a.m.: Mar. 10, 24, Apr. 14, 28, May 12, 26, June 9, 23

Cystic Fibrosis Clinics

Portland – Maine Medical Center
9:00 a.m.: Mar. 18, Apr. 15, May 20, June 17
Lewiston – Central Maine General Hospital
9:00 a.m.: Mar. 7, Apr. 4, May 2, June 6

Family Planning Clinics

Augusta – Augusta General Hospital
Once a month – Call hospital for appointment
Bangor – Eastern Maine General Hospital
Morning clinic: Mar. 7, 21, Apr. 4, 18, May 2, 16, June 6, 20
Portland – Maine Medical Center
Clinics are held weekly by appointment only

Hemophilia Clinic

Portland – Maine Medical Center
Appointments made through this office on an individual basis

For specialty services not identified or beyond reasonable distance from the specified clinic centers, contact the Director of the Division of Maternal and Child Health and Crippled Children's Services, Department of Health and Welfare, Augusta, Maine 04330.

St. Mary's Medical Staff Names Officers and Committee Chairmen

New medical staff officers and committee chairmen for St. Mary's General Hospital have been announced by Sister St. Theophane, hospital administrator.

Officers elected by the medical staff are Dr. Cyprien L. Martel, president; Dr. Gerard Morin, vice president, and Dr. Robert D. Wakefield, West Auburn and formerly of Burlington, Vt., secretary.

Also on the executive committee are Dr. Geraldine Lynn and Dr. Horacio A. Lichter, Auburn, elected members; Dr. Wilfred A. Cloutier, chief of surgery, and Dr. Paul J. Laflamme, chief of medicine.

Committee chairmen, appointed by the executive committee, include Dr. Norman O. Gauvreau, credentials; Dr. Joseph J. Rando, accreditation and by-laws; Dr. Martel, joint conference; Dr. Lawrence A. Nadeau, public relations; Dr. Paul J. Fortier, scholarship; Dr. Lichter, infection; Dr. Cloutier, utilization review.

Dr. Thomas F. Shields, house officer; Dr. Mary Dycio, pharmacy; Dr. George Dycio, library; Dr. Richard Taylor, chairman, and Dr. Rando, coordinator, education; Dr. Shields, disaster; Dr. Morin, tumor conference; Dr. Nadeau, chairman, and Dr. Gauvreau, coordinator, planning; and Dr. Behzad Fakhery, emergency room.

The consulting committee includes Dr. Linwood Sweatt, Auburn, OBS-GYN; Dr. Bertrand Beliveau, internal medicine; Dr. Cloutier, surgery; Dr. Lichter, pediatrics; Dr. Paul J. Fortier, orthopedics; Dr. Rando, urology; Dr. John T. Konecki, Auburn, radiology; Dr. Basil D. Amfilo, anesthesiology; Dr. Wakefield, pathology, and Dr. H. Reuben Leitman, psychiatry.

Trans-International Psychosomatic Seminars

TIPS is a nonprofit, nonpolitical, nonsectarian, voluntary, educational organization, with the purpose of taking up-to-date information about psychosomatic medicine to all sections of the world, when invited to do so by the local medical societies or medical schools, and to receive in exchange their comments.

Scientific discussions will be held for 63 days aboard the SS President Cleveland sailing from San Francisco, December 20, 1969, and then ashore at Los Angeles, Honolulu, Papeete in Tahiti, Pago Pago in Samoa, Suva in Fiji, Auckland in New Zealand, Sydney in Australia, Port Moresby in New Guinea, Bali, Singapore, Hong Kong, Manila in P.I., and Guam in the Mariana Islands. The ship is fully air-conditioned, stabilized, and has a passenger capacity of 682.

Each TIPS member will bear his or her own expenses, but those taking part in the seminars may apply for tax deduction, which has been granted in the past. All reservations should be made through Dr. J. L. McCartney, Director of TIPS, Box 1309, Westhampton Beach, New York 11978.

Cardiac Defibrillator

Used ECT Unit Labelled Park ECT #B-24 available.
For complete information write to:
D. Keith McElroy, M.D., Columbia Presbyterian Medical Center, 180 Fort Washington Avenue, New York, N. Y. 10032.

Physicians Wanted

Two general surgeons and one internist for two year overseas assignment. Board certified, over 35, salary and related benefits. One surgeon required for service in Caribbean area available immediately; surgeon and internist for Afghanistan July, 1969. Interested parties contact MEDICO, a Service of CARE, 660 First Avenue, New York 10016, phone (212) 686-3110.

To fight TB- find it first!

Make tuberculin testing routine with every physical examination.



TUBERCULIN, TINE TEST (Rosenthal)

Side effects are possible but rare: vesiculation, ulceration, or necrosis at test site. Contraindications: none, but use with caution in active tuberculosis. Available in 5's and 25's.

Lederle

B30–8/6135

the thousandth teaspoonful

Peptic ulcer patients find the thousandth dose of this antacid as effective and easy-to-take as the first!



Optimal neutralization[1] — provided by the combination of aluminum and magnesium hydroxides.

Unfailing good taste — confirmed by 87.5% of 104 patients in one study, after a total of 20,459 documented days on Mylanta Liquid or tablets.[2]

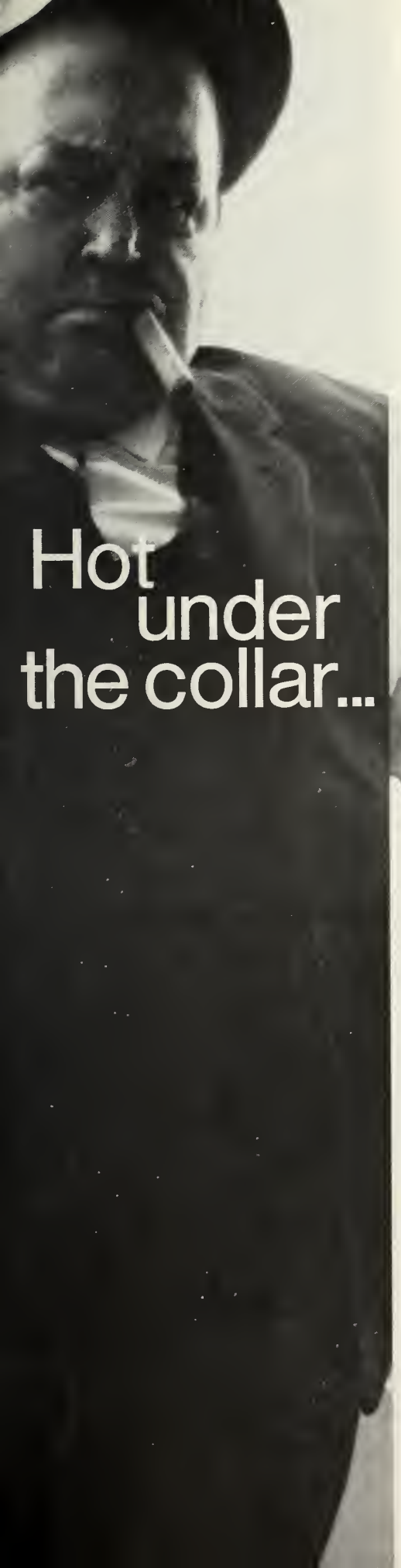
Concomitant relief of G. I. gas distress — provided by the proven antiflatulent action of simethicone[3].

Dosage: One or two tablets (well chewed or allowed to dissolve in the mouth); one or two teaspoonsful to be taken between meals and at bedtime, or as directed by physician.

References: 1. Merck & Co., Merck Chemical Division: Antacid Literature Survey, Rahway, New Jersey. (MM3041, R-1286-K REV 463.) 2. Danhof, I.E., report on file. 3. Hoon, J.R.: Arch. Surg. *93*:467 (Sept.) 1966.

Mylanta®
LIQUID/TABLETS
aluminum and magnesium hydroxides *plus* simethicone

Stuart Division/ATLAS CHEMICAL INDUSTRIES, INC./Pasadena, Calif. 91109



Hot under the collar...



high under the cuff.

Sometimes
he forgets he has hypertension, gets hot under the collar...high under the cuff.

For such patients, consider **Regroton®**

chlorthalidone	50 mg.
reserpine U.S.P.	0.25 mg.

To lower blood pressure and allay anxiety in hypertension.

For brief summary of prescribing information, see next page.

RE-6392

Regroton®

Geigy

chlorthalidone 50 mg.
reserpine U.S.P. 0.25 mg.

the once-a-day tablet for anxious hypertensives

Regroton is a combination of two basic antihypertensives designed to lower blood pressure and allay anxiety in hypertension. With Regroton he can keep his shirt on and you can keep his blood pressure down.

Before prescribing, please review carefully the indications, contraindications, warning, precautions, adverse reactions and dosage information below.

Regroton®
Each tablet contains.
chlorthalidone 50 mg.
reserpine U.S.P. 0.25 mg

Indications. Hypertension.
Contraindications: History of mental depression, hypersensitivity and most cases of severe renal or hepatic diseases.
Warning: With the administration of enteric-coated potassium supplements, which should be used only when adequate dietary supplementation is not practical, the possibility of small-bowel lesions (obstruction, hemorrhage, and perforation) should be kept in mind. Surgery for these lesions has frequently been required and deaths have occurred. Discontinue coated potassium-containing formulations immediately if abdominal pain, distention, nausea, vomiting, or gastrointestinal bleeding occur. Discontinue one week before electroshock therapy, and if depression or peptic ulcer occurs.
Use in pregnancy: Because chlorthalidone may cross the placental barrier and appear in cord blood and thiazides may appear in breast milk, this drug should be used with care in pregnant patients and nursing mothers. When used in women of childbearing age, the potential benefits of the drug should be weighed against the possible hazards to the fetus. Use of chlorthalidone may result in fetal or neonatal jaundice, thrombocytopenia, and possibly other adverse reactions which have occurred in the adult. Increased respiratory secretions, nasal congestion, cyanosis and anorexia may occur in infants born to reserpine-treated mothers.
Precautions: Antihypertensive therapy with this drug should always be initiated cautiously in postsympathectomy patients and in patients receiving ganglionic blocking agents, other potent antihypertensive drugs, or curare. Reduce dosage of concomitant antihypertensive agents by at least one-half. To avoid hypotension during surgery, discontinue therapy with this agent two weeks prior to elective surgical procedures. In emergency surgery, use, if needed, anticholinergic or adrenergic drugs or other supportive measures as indicated. Because of the possibility of progression of renal damage, periodic kidney function tests are indicated. Discontinue if the BUN rises or liver dysfunction is aggravated. Hepatic coma may be precipitated. Electrolyte imbalance, sodium and/or potassium depletion may occur. If potassium depletion should occur during therapy, the drug should be discontinued and potassium supplements given, provided the patient does not have marked oliguria.
Take particular care in cirrhosis or severe ischemic heart disease and in patients receiving corticosteroids, ACTH, or digitalis. Severe salt restriction is not recommended. Use cautiously in patients with ulcerative colitis or gallstones (biliary colic may be precipitated). Bronchial asthma may occur in susceptible patients.
Adverse Reactions: The drug is generally well tolerated. The most frequent side effects are nausea, gastric irritation, vomiting, diarrhea, constipation, muscle cramps, headache, dizziness and acute gout. Other potential side effects include angina pectoris, anxiety, depression, bradycardia and ectopic cardiac rhythms (especially when used with digitalis), drowsiness, dull sensorium, hyperglycemia and glycosuria, hyperuricemia, lassitude, restlessness, transient myopia, impotence or dysuria, orthostatic hypotension which may be potentiated when chlorthalidone is combined with alcohol, barbiturates or narcotics, leukopenia, aplastic anemia, skin rashes, thrombocytopenia, agranulocytosis, nasal stuffiness, increased gastric secretions, nightmare, purpura, urticaria, ecchymosis, weakness, uveitis, optic atrophy and glaucoma, and pruritus. Eruptions and/or flushing of the skin, a reversible paralysis agitans-like syndrome, blurred vision, conjunctival injection, increased susceptibility to colds, dyspnea, weight gain, decreased libido, dryness of the mouth, deafness, anorexia, and pancreatitis when epigastric pain or unexplained G.I. symptoms develop after prolonged administration. Jaundice, xanthopsia, paresthesia, photosensitization and necrotizing angiitis are possible.
Average Dosage: One tablet daily with breakfast.
Availability: Pink, single-scored tablets in bottles of 100 and 1000.
(B)46-600-C
For details, please see complete prescribing information.

Geigy Pharmaceuticals
Division of
Geigy Chemical Corporation
Ardsley, New York 10502

RE-6392



"Man's best friend" in wintertime diarrheas

In winter "flu" and viral gastroenteritis, Donnagel (4 oz. size!) can bring aid and comfort to sufferers from both diarrhea and its discomforts because it contains kaolin and pectin plus belladonna alkaloids (as in Donnatal®). Donnagel treats the whole diarrhea problem. Available on your prescription or recommendation. A. H. Robins Company, Richmond, Va. 23220

A·H·ROBINS

CLEAR THE TRACT!

ROBITUSSIN®



THERE'S A FORMULATION FOR EVERY COUGHING NEED

All five members of the Robitussin family contain glyceryl guaiacolate. This outstanding expectorant agent increases the output of lower respiratory tract fluid (R.T.F.) Increased R.T.F. volume thins mucus, thereby improving the action of bronchial and tracheal cilia and making thick, inspissated mucus less viscid and easier to raise.

For coughs of colds and "flu"

ROBITUSSIN®

Each 5 cc. contains:

Glyceryl guaiacolate	100 mg.
Alcohol, 3.5%	

For unproductive, allergic coughs

ROBITUSSIN A-C® (exempt narcotic)

Each 5 cc. contains:

Glyceryl guaiacolate	100 mg.
Phenıramine maleate	7.5 mg.
Codeine phosphate	10.0 mg.
(warning: may be habit forming)	
Alcohol, 3.5%	

Non-narcotic for 6-8 hour cough control

ROBITUSSIN-DM®

Each 5 cc. contains:

Glyceryl guaiacolate	100 mg.
Dextromethorphan hydrobromide	15.0 mg.
Alcohol, 1.4%	

Robitussin-DM in solid form for "coughs on the go"

COUGH CALMERS™

Each Cough Calmer contains:

Glyceryl guaiacolate	50 mg.
Dextromethorphan hydrobromide	7.5 mg.

Clears sinuses and nasal stuffiness as it relieves cough

ROBITUSSIN-PE®

Each 5 cc. contains:

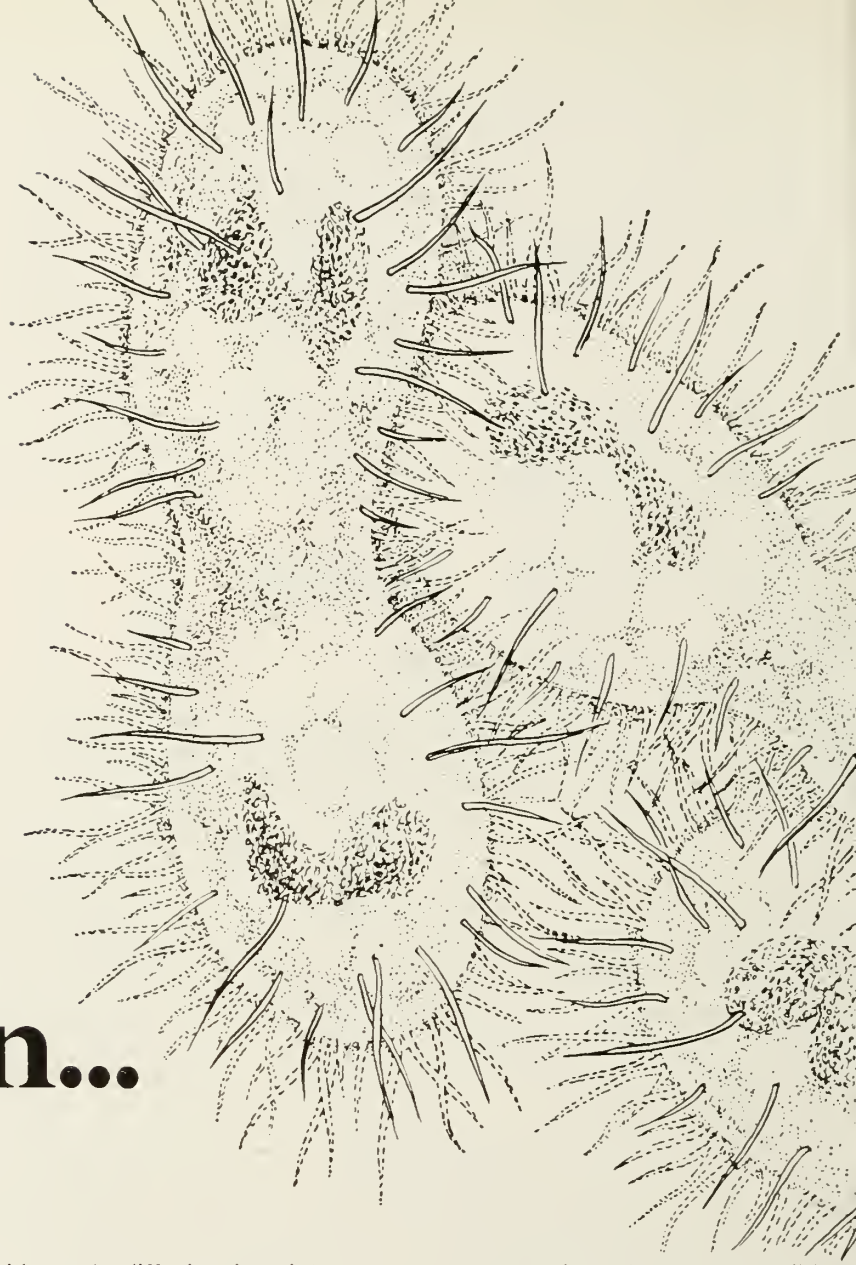
Glyceryl guaiacolate	100 mg.
Phenylephrine hydrochloride	10.0 mg.
Alcohol, 1.4%	

	Robitussin	Robitussin A-C	Robitussin-DM	Cough Calmers	Robitussin-PE
Expectorant	●	●	●	●	●
Demulcent	●	●	●	●	●
Cough Suppressant		●	●	●	
Antihistamine		●			
Non-Narcotic	●		●	●	●
Long-Acting (6-8 Hours)			●	●	
Nasal, Sinus Decongestant					●

PHOTO BY VICTOR HAND

A. H. Robins Company, Richmond, Va. 23220

A·H·ROBINS



A high index of suspicion... E. coli

How high is the "index of suspicion" for *E. coli* in urinary tract infections?

Recently it has been estimated that about 86 per cent of positive cultures in first attacks of urinary tract infection are *E. coli*.[1] It has also been noted that "The coliform group, especially *E. coli*, accounts for approximately 90 per cent of initial infections...."[2]

Consider wide-spectrum Gantanol® (sulfamethoxazole) for its high "index of confidence"—its proven effectiveness against *E. coli* and other sensitive gram-negative and gram-positive organisms. Therapeutic levels of Gantanol in blood and urine are achieved within 2 hours after a 2-Gm starting dose, with ready diffusion into interstitial fluids. Responsive infections generally clear within 5 to 7 days, with relief of symptoms usually seen within 24-48 hours.

Gantanol also earns its high "index of confidence" because Gantanol therapy is relatively free from complications, including the problem of bacterial resistance or superinfection.

Convenient, economical dosage schedule: *b.i.d.*

References: 1. Vernier, R. L., in Patient Care Feature: *Patient Care, 1*:20 (Feb.) 1967. **2.** Beeson, P. B.: "The Infectious Diseases," in Beeson, P. B., and McDermott, W. (eds.): *Cecil-Loeb Textbook of Medicine*, ed. 12, Philadelphia, W. B. Saunders Company, 1967, p. 230.

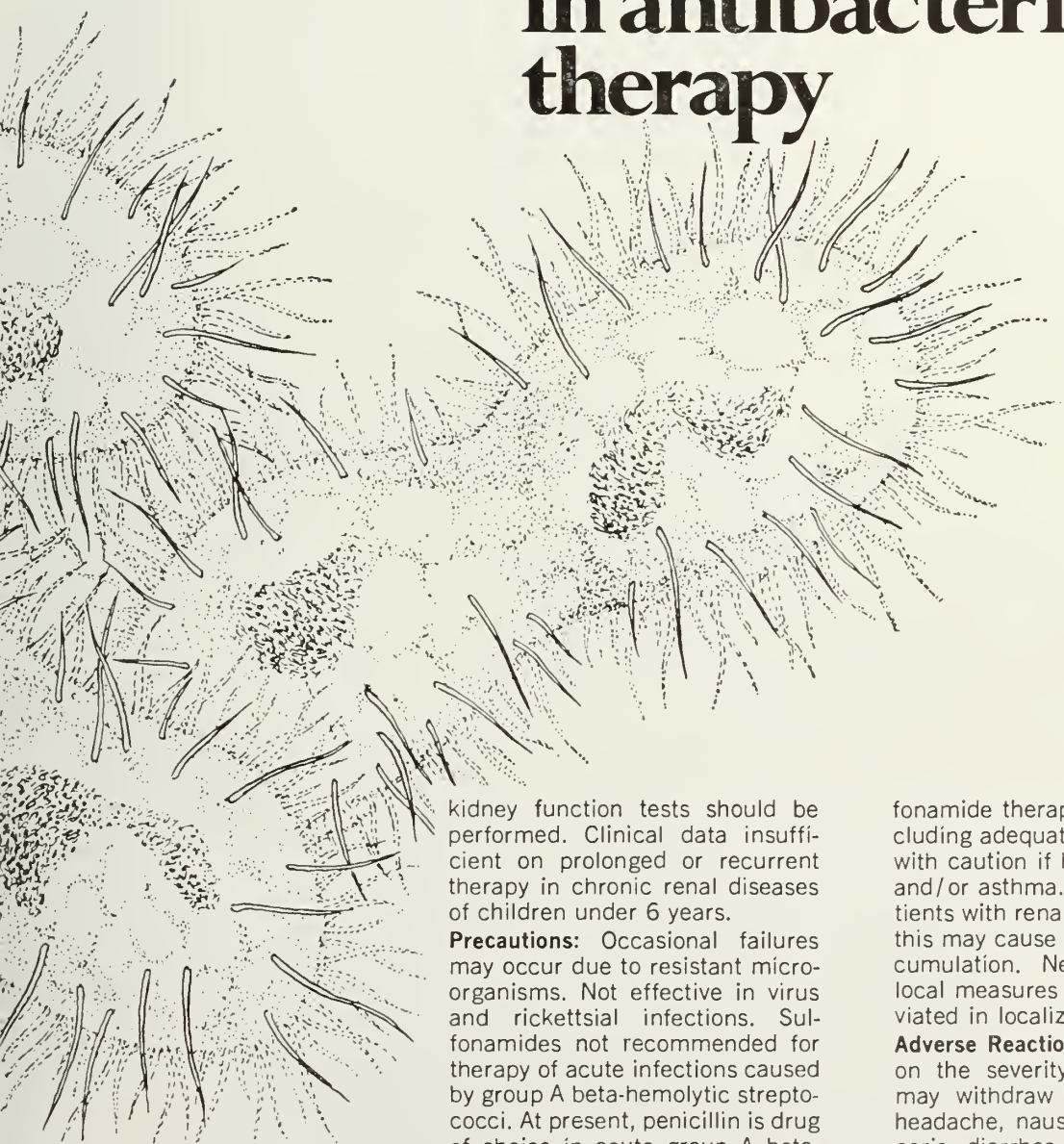
Before prescribing, please consult complete product information, a summary of which follows:

Indications: Acute and chronic urinary tract, respiratory and soft tissue infections due to susceptible microorganisms; prophylactically following diagnostic instrumental procedures on genitourinary tract.

Contraindicated in sulfonamide-sensitive patients, pregnant females at term, premature infants, or newborn infants during first 3 months of life.

Warnings: Use only after critical appraisal in patients with liver or renal damage, urinary obstruction or blood dyscrasias. Deaths reported from hypersensitivity reactions, Stevens-Johnson syndrome, agranulocytosis, aplastic anemia and other blood dyscrasias. In closely intermittent or prolonged therapy, blood counts and liver and

For a high index of confidence... Gantanol® (sulfamethoxazole) in antibacterial therapy



Artist's rendition of E. coli. As with most strains of E. coli, these have flagella and are motile.

kidney function tests should be performed. Clinical data insufficient on prolonged or recurrent therapy in chronic renal diseases of children under 6 years.

Precautions: Occasional failures may occur due to resistant microorganisms. Not effective in virus and rickettsial infections. Sulfonamides not recommended for therapy of acute infections caused by group A beta-hemolytic streptococci. At present, penicillin is drug of choice in acute group A beta-hemolytic streptococcal infections; although Gantanol has produced favorable bacteriologic conversion rates in this infection, data insufficient on long-term follow-up studies as to its effect on sequelae of rheumatic fever or acute glomerulonephritis. If other treatment cannot be used and Gantanol is employed in such infections, *important that therapy be continued in usual recommended dosage for at least 10 days.* Observe usual sulfonamide therapy precautions, including adequate fluid intake. Use with caution if history of allergies and/or asthma. Follow closely patients with renal impairment since this may cause excessive drug accumulation. Need for indicated local measures or surgery not obviated in localized infections.

Adverse Reactions: Depending upon the severity of the reaction, may withdraw drug in event of headache, nausea, vomiting, urticaria, diarrhea, hepatitis, pancreatitis, blood dyscrasias, neuropathy, drug fever, Stevens-Johnson syndrome, skin rash, injection of the conjunctiva and sclera, petechiae, purpura, hematuria and crystalluria.

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Nutley, New Jersey 07110



Dear Doctor,
You made me
what I am today
a whole lot
slimmer!

TEPANIL —the right start in support of the weight-control program *you* recommend. It reduces the appetite. Doesn't kill it. Weight loss is significant—gradual—yet there is a relatively low incidence of CNS stimulation. Because TEPANIL works on the appetite, not on the "nerves."

Controindicotions: Contraindicated concurrently with MAO inhibitors, in patients hypersensitive ta diethylprapian hydrochloride, and in ematianally unstable patients knawn ta be susceptible to drug obuse.

Warning: Althaugh generally safer than the amphetamines, use great cautian when prescribing for patients with severe hypertension or severe cardiavascular disease. Should not be used during the first trimester of pregnancy unless potential benefits autweigh potential risks.

Side Effects: While rorely causing theropy to be withdrawn, side effects may accur accasianally; CNS effects (such as insomnia, nervousness, jitteriness), dryness af mauth, thirst, nausea, abdaminal distress, canstipatian, headache, allergic respanse including urticaria or ather dermatitis; rarely associated with tachycardia, cardiac arrhythmia or ECG changes.

Convenience of two dosage forms: TEPANIL Ten-tab tablets: One 75 mg. tablet daily, swallawed whale, in midmarning (10 a.m.); TEPANIL: One 25 mg. tablet three times daily, ane hour before meals. If desired, an additianal tablet may be given in midevening to avercome night hunger.

Use in children under 12 years af age is not recommended.

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON-MERRELL INC.
PHILADELPHIA, PENNSYLVANIA 19144

Tepanil® Ten-tab®

(continuous release form)

(diethylpropion hydrochloride)

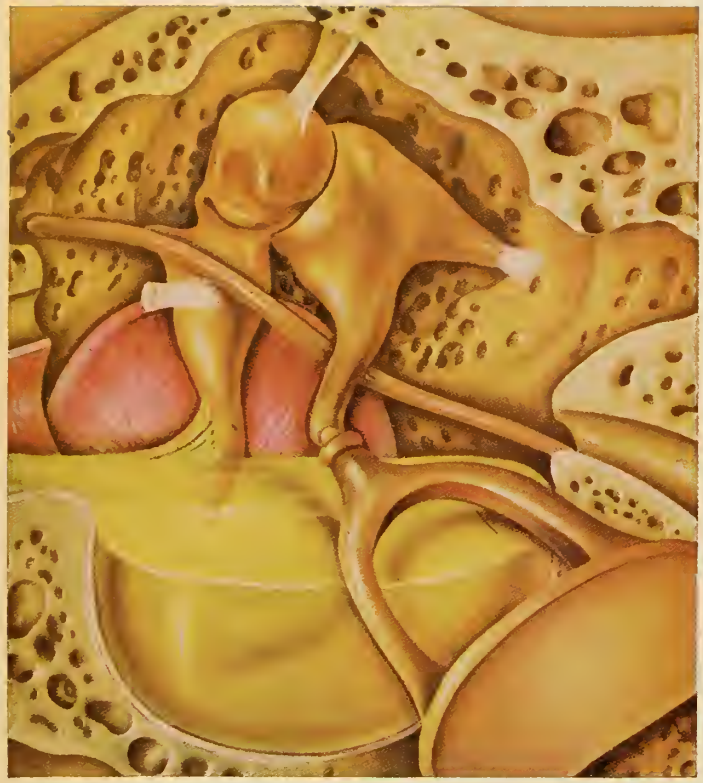
T817A U.S. PATENT NO. 3,001,810 1/69

See next page for prescribing informatio



You've made it one of your specifics in acute otitis media

DECLOMYCIN®
DEMETHYLCHLORTETRACYCLINE



You've made it one of your specifics in acute otitis media

DECLOMYCIN acts against many strains of H. influenzae, pneumococci and streptococci, the most common invaders. In otitis media, where it is difficult to isolate the causative organism, this coverage may be important. However, some strains may be resistant and other pathogens can be involved.

You've found the high serum levels of DECLOMYCIN important, too. Its prolonged action permits convenient 300 mg b.i.d. or 150 mg q.i.d. administration.

When specimens are obtainable, your culture studies will indicate the usefulness of DECLOMYCIN.

Effectiveness: DECLOMYCIN Demethylchlortetracycline should be equally or more effective therapeutically than other tetracyclines in infections caused by organisms sensitive to the tetracyclines.

Contraindication: History of hypersensitivity to demethylchlortetracycline.

Warning: In renal impairment, usual doses may lead to excessive accumulation and liver toxicity. Under such conditions, lower than usual doses are indicated, and, if therapy is prolonged, serum level determinations may be advisable. A photodynamic reaction to natural or artificial sunlight has been observed. Small amounts of drug and short exposure may produce an exaggerated sunburn reaction which may range from erythema to severe skin manifestations. In a smaller proportion, photoallergic reactions have been reported. Patients should avoid direct exposure to sunlight and discontinue drug at the first evidence of skin discomfort. Necessary subsequent courses of treatment with tetracyclines should be carefully observed.

Precautions: Overgrowth of nonsusceptible organisms may occur. Constant observation is essential. If new infections appear, appropriate measures should be taken. In infants, increased intracranial pressure with bulging fontanels has been observed. All signs and symptoms have disappeared rapidly upon cessation of treatment.

Side Effects: Gastrointestinal system—anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis, pruritus ani. Skin—maculopapular and erythematous rashes; a rare case of exfoliative dermatitis has been reported. Photosensitivity; onycholysis and discoloration of the nails (rare). Kidney—rise in BUN, apparently dose-related. Transient increase in urinary output, sometimes accompanied by thirst (rare). Hypersensitivity reactions—urticaria, angioneurotic edema, anaphylaxis. Teeth—dental staining (yellow-brown) in children of mothers given this drug during the latter half of pregnancy, and in children given the drug during the neonatal period, infancy and early childhood. Enamel hypoplasia has been seen in a few children. If adverse reaction or idiosyncrasy occurs, discontinue medication and institute appropriate therapy. Demethylchlortetracycline may form a stable calcium complex in any bone-forming tissue with no serious harmful effects reported thus far in humans.

Average Adult Daily Dosage: 150 mg q.i.d. or 300 mg b.i.d. Should be given 1 hour before or 2 hours after meals, since absorption is impaired by the concomitant administration of high calcium content drugs, foods and some dairy products. Treatment of streptococcal infections should continue for 10 days, even though symptoms have subsided.

DECLOMYCIN®
DEMETHYLCHLORTETRACYCLINE

Capsules: 150 mg; **Tablets:** film coated, 300 mg, 150 mg and 75 mg of demethylchlortetracycline HCl.

398 8

LEDERLE LABORATORIES, A Division of
American Cyanamid Company, Pearl River, New York

Lederle



heavenly relief
for unearthly cough

Benylin®
EXPECTORANT

Each fluidounce contains: 80 mg. Benadryl® (diphenhydramine hydrochloride, Parke-Davis); 12 grains ammonium chloride; 5 grains sodium citrate; 2 grains chloroform; 1/10 grain menthol; and 5% alcohol.

An antitussive and expectorant for control of coughs due to colds or of allergic origin, BENYLIN EXPECTORANT is the leading cough preparation of its kind.

BENYLIN EXPECTORANT tends to inhibit cough reflex... soothes irritated throat membranes. And its not-too-sweet, pleasant raspberry flavor makes BENYLIN EXPECTORANT easy to take.

PRECAUTIONS: Persons who have become drowsy on this or other antihistamine-containing drugs, or whose tolerance is not known, should not drive vehicles or engage in other activities requiring keen response while using this preparation. Hypnotics, sedatives, or tranquilizers if used with BENYLIN EXPECTORANT should be prescribed with caution because of possible additive effect. Diphenhydramine has an atropine-like action which should be considered when prescribing BENYLIN EXPECTORANT.

ADVERSE REACTIONS: Side reactions may affect the nervous, gastrointestinal, and cardiovascular systems. Drowsiness, dizziness, dryness of the mouth, nausea, nervousness, palpitation, and blurring of vision have been reported. Allergic reactions may occur.

PACKAGING: Bottles of 4 oz., 16 oz., and 1 gal.

Parke, Davis & Company
Detroit, Michigan 48232

PARKE-DAVIS

410R69

A once-popular treatment for back pains was to have the seventh son of a seventh son stand or walk on the patient's back.





The pain of earache was allegedly relieved by holding a hot roasted onion to the ear.

For headache, a sovereign remedy was to wear a snakeskin round one's head.



A realistic approach to pain relief



'Empirin'®

Compound with Codeine Phosphate gr. 1/2 No. 3

Each tablet contains:
Codeine Phosphate gr. 1/2 (Warning—May be habit forming), Phenacetin gr. 2 1/2, Aspirin gr. 3 1/2, Caffeine gr. 1/2.

keeps the promise of pain relief

'B.W. & Co.' narcotic products are Class "B", and as such are available on oral prescription, where State law permits.

BURROUGHS WELLCOME & CO. (U.S.A.) INC.
Tuckahoe, N.Y.

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Endorsed by the Maine Medical Association

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465 Congress Street

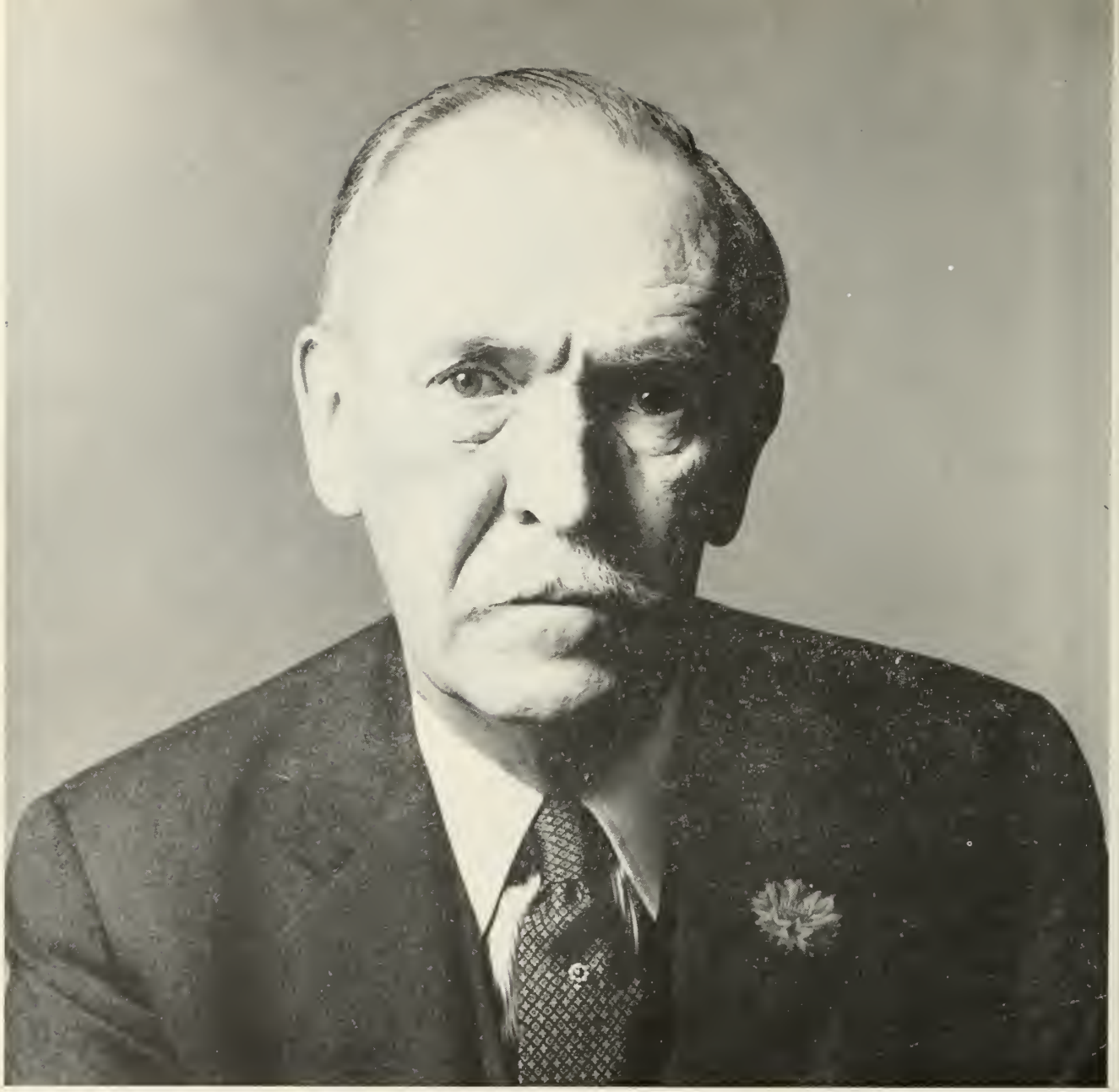
Portland, Maine

SPECIALIST IN MALPRACTICE INSURANCE

Serving Maine doctors in all forms of insurance for over 90 years

LAWRENCE D. CHAPMAN
EDWARD D. NOYES III

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Help the Needy!

This patient may appear to "have everything" but, like so many people getting along in years, he may well be in need—*medically*. Though there is no evidence of organic disease, he does have symptoms (fatigue, vague aches and pains, malaise) that may be indicative of—

a need to maintain anabolic balance... to counteract declining gonadal hormone secretion and forestall premature degenerative changes related to estrogen deficiency;

a need for mood elevation... to impart a gentle emotional uplift;

a need for nutritional supplementation... to compensate for the poor eating habits and subsequent dietary insufficiency of so many older people.

For these needs, consider MEDIATRIC for your next "needy" patient... medically.

MEDIATRIC provides specific agents to fulfill a need in the three areas:

1. **Gonadal steroids** [PREMARIN® (conjugated estrogens-equine), an orally active, natural estrogen, and methyltestosterone] for physiologic and metabolic benefits.

2. **Methamphetamine** to provide gentle elevation of mood.

3. **Nutritional supplements** specially selected to meet the requirements of the elderly individual.

Mediatric®

tablets • capsules • liquid

Steroid-nutritional compound

	Each MEDIATRIC® Tablet or Capsule contains:	Each 15 cc. (3 teaspoonfuls) of MEDIATRIC® Liquid contains:
Conjugated estrogens-equine (PREMARIN®)	0.25 mg.	0.25 mg.
Methyltestosterone	2.5 mg.	2.5 mg.
Methamphetamine HCl	1.0 mg.	1.0 mg.
Cyanocobalamin	2.5 mcg.	1.5 mcg.
Intrinsic factor concentrate	8.0 mg.	—
Thiamine HCl	—	5.0 mg.
Thiamine mononitrate	10.0 mg.	—
Riboflavin	5.0 mg.	—
Niacinamide	50.0 mg.	—
Pyridoxine HCl	3.0 mg.	—
Calcium pantothenate	20.0 mg.	—
Ferrous sulfate exsic.	30.0 mg.	—
Ascorbic acid	100.0 mg.	—
		Contains 15% alcohol†

† Some Loss Unavoidable.

Contraindication: Carcinoma of the prostate, due to methyltestosterone component.

Warning: Some patients with pernicious anemia may not respond to treatment with the Tablets or Capsules, nor is cessation of response predictable. Periodic examinations and laboratory studies of pernicious anemia patients are essential and recommended.

Side Effects: In addition to withdrawal bleeding, breast tenderness or hirsutism may occur.

Suggested Dosages: *Male and female*—1 Tablet or Capsule, or 3 teaspoonfuls Liquid, daily or as required.

In the female: To avoid continuous stimulation of breast and uterus, cyclic therapy is recommended (3 week regimen with 1 week rest period—Withdrawal bleeding may occur during this 1 week rest period).
In the male: A careful check should be made on the status of the prostate gland when therapy is given for protracted intervals.

Supplied: No. 752—MEDIATRIC Tablets, in bottles of 100 and 1,000.
No. 252—MEDIATRIC Capsules, in bottles of 30, 100, and 1,000.
No. 910—MEDIATRIC Liquid, in bottles of 16 fluidounces.



AYERST LABORATORIES
New York, N.Y. 10017 • Montreal, Canada

6909

DIARRHEA

TROCINATE

THIPHENAMIL HCl

The first 400 mg. Trocinate tablet usually relieves discomfort so promptly that Diarrhea ceases to be a bother

Trocinate has no known therapeutic value other than relaxing smooth muscle by direct action when coming in contact with the spastic muscle cell. Trocinate has none of the troublesome side-effects of anticholinergic drugs. Trocinate relieves the discomfort of diarrhea by decreasing both peristalsis and muscle tone. Trocinate is metabolized by the body and eliminated in the urine as harmless degradation products. Normal intestinal function is resumed.

The action of Trocinate is prompt, making the spacing of dosage easy. Often one or two 400 mg. tablets are sufficient to control diarrhea. The recommended dosage in spasm of the G. I. and G. U. tract is 400 mg. q. 4 h. A prescription of twelve (12) 400 mg. tablets will, in most cases, allow the patient to have a few to keep in reserve.

Literature and samples available

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Contraindications: Hypersensitivity to tetracycline.

Warning: In renal impairment, since liver toxicity is possible, lower doses are indicated; during prolonged therapy consider serum level determinations. Photodynamic reaction to sunlight may occur in hypersensitive persons. Photosensitive individuals should avoid exposure; discontinue treatment if skin discomfort occurs.

Precautions: Nonsusceptible organisms may overgrow; treat superinfection appropriately. Tetracycline may form a stable calcium complex in bone-forming tissue and may cause dental staining during tooth development (last half of pregnancy, neonatal period, infancy, early childhood).

Side Effects: *Gastrointestinal*—anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis, pruritus ani. *Skin*—maculopapular and erythematous rashes; exfoliative dermatitis; photosensitivity; onycholysis, nail discoloration. *Kidney*—dose-related rise in BUN. *Hypersensitivity reactions*—urticaria, angioneurotic edema, anaphylaxis. *Intracranial*—bulging fontanels in young infants. *Teeth*—yellow-brown staining; enamel hypoplasia. *Blood*—anemia, thrombocytopenic purpura, neutropenia, eosinophilia. *Liver*—cholestasis at high dosage.

Upon adverse reaction, stop medication and treat appropriately.

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359-8

Suspected tetracycline-sensitive infection?

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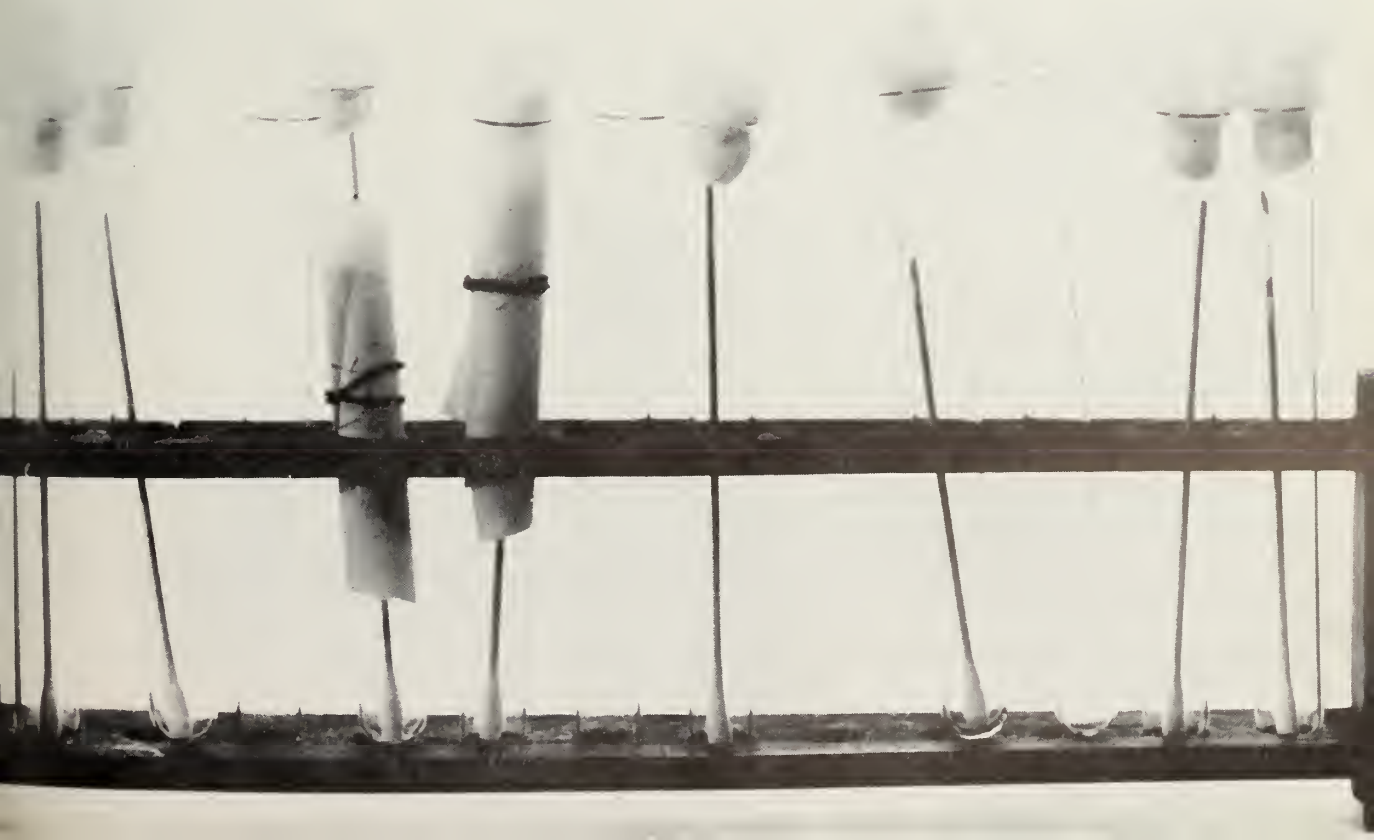
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Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma.
Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms have occurred following abrupt discontinuance. Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.
Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.
Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation, have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

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1969 Annual Session
The Samoset, Rockland
June 15, 16, 17

THE JOURNAL
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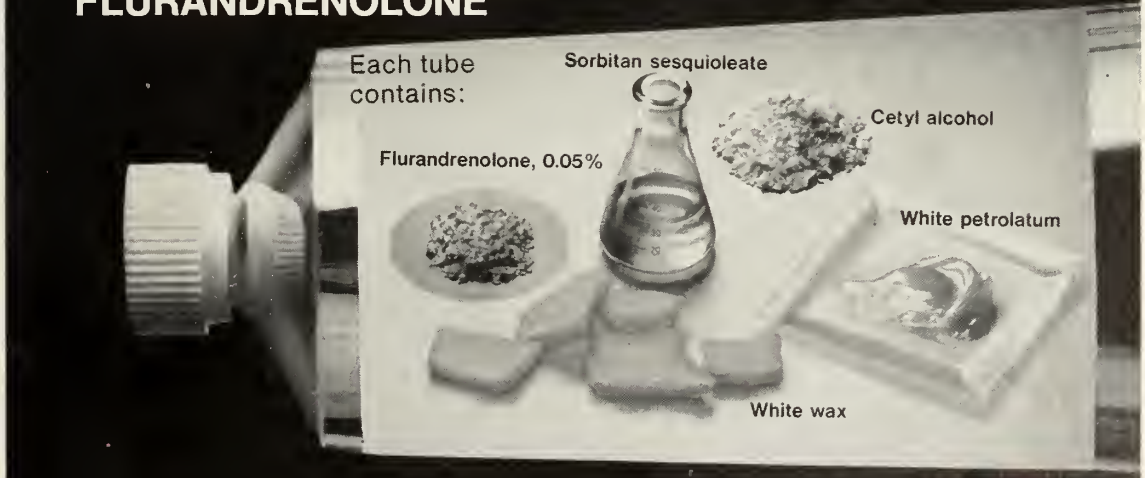
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References:
(1) Siver, R. H.: CMD, *21*:109, September 1954. (2) Frykman, H. H.: Minn. Med., *38*:19-27, January 1955. (3) McGivney, J.: Tex. State Jour. Med., *51*:16-18, January 1955. (4) Quehl, T. M.: Jour. of Florida Acad. Gen. Prac., *15*:15-16, October 1965. (5) Weekes, D. J.: N.Y. State Jour. Med., *58*:2672-2673, August 1958. (6) Weekes, D. J.: EENT Digest, *25*:47-59, December 1963. (7) Abbott, P. L.: Jour. Oral Surg., Anes., & Hosp. Dental Serv., 310-312, July 1961. (8) Rapoport, L. and Levine, W. I.: Oral Surg., Oral Med. & Oral Path., *20*:591-593, November 1965.

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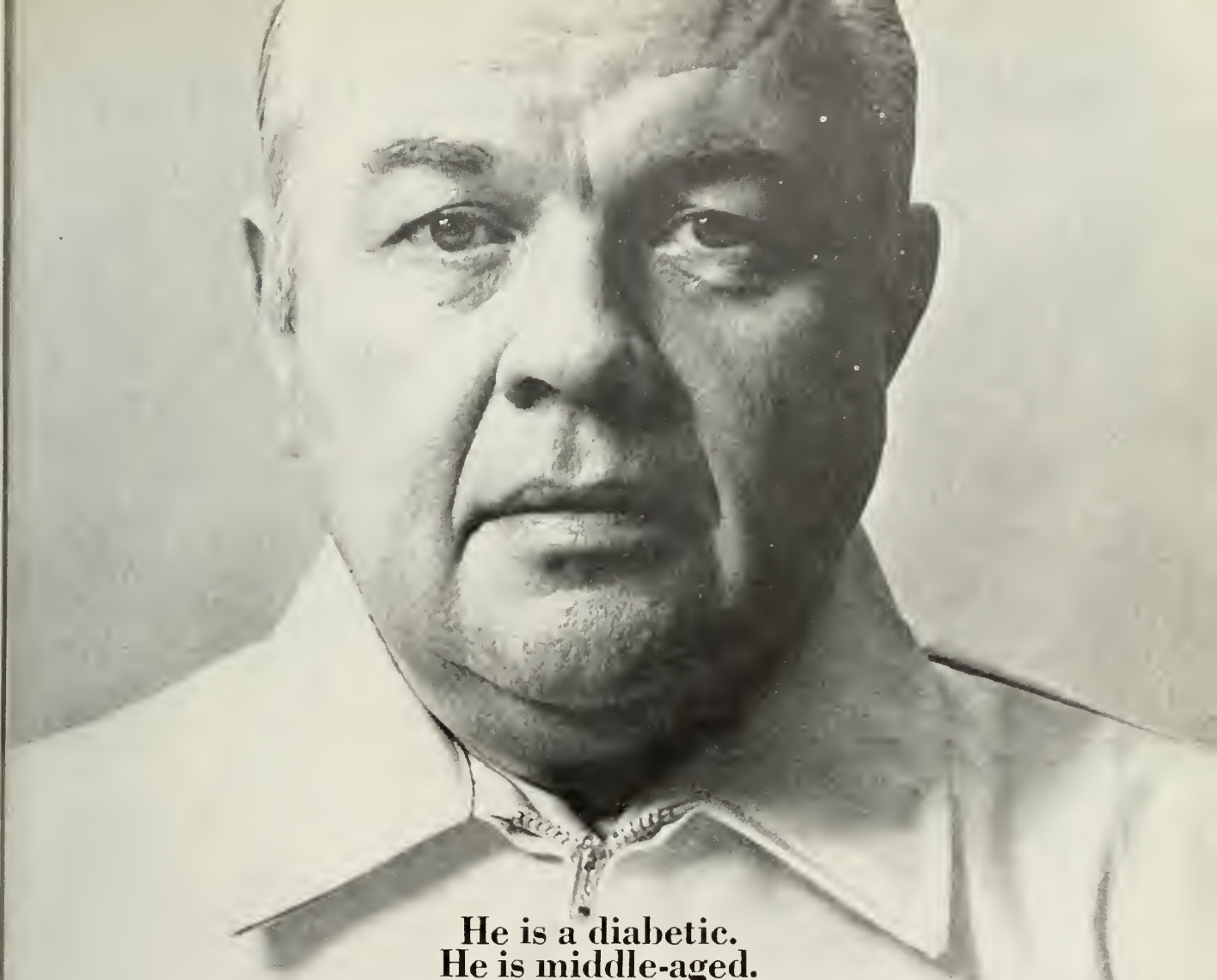
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Precautions: Overgrowth of nonsusceptible organisms may occur. Constant observation is essential. If new infections appear, appropriate measures should be taken. In infants, increased intracranial pressure with bulging fontanels has been observed. All signs and symptoms have disappeared rapidly upon cessation of treatment.

Side Effects: Gastrointestinal system—anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis, pruritus ani. Skin—maculopapular and erythematous rashes; a rare case of exfoliative dermatitis has been reported. Photosensitivity; onycholysis and discoloration of the nails (rare). Kidney—rise in BUN, apparently dose related. Transient increase in urinary output, sometimes accompanied by thirst (rare). Hypersensitivity reactions—urticaria, angioneurotic edema, anaphylaxis. Teeth—dental staining (yellow-brown) in children of mothers given this drug during the latter half of pregnancy, and in children given the drug during the neonatal period, infancy and early childhood. Enamel hypoplasia has been seen in a few children. If adverse reaction or idiosyncrasy occurs, discontinue medication and institute appropriate therapy. Demethylchlortetracycline may form a stable calcium complex in any bone-forming tissue with no serious harmful effects reported thus far in humans.

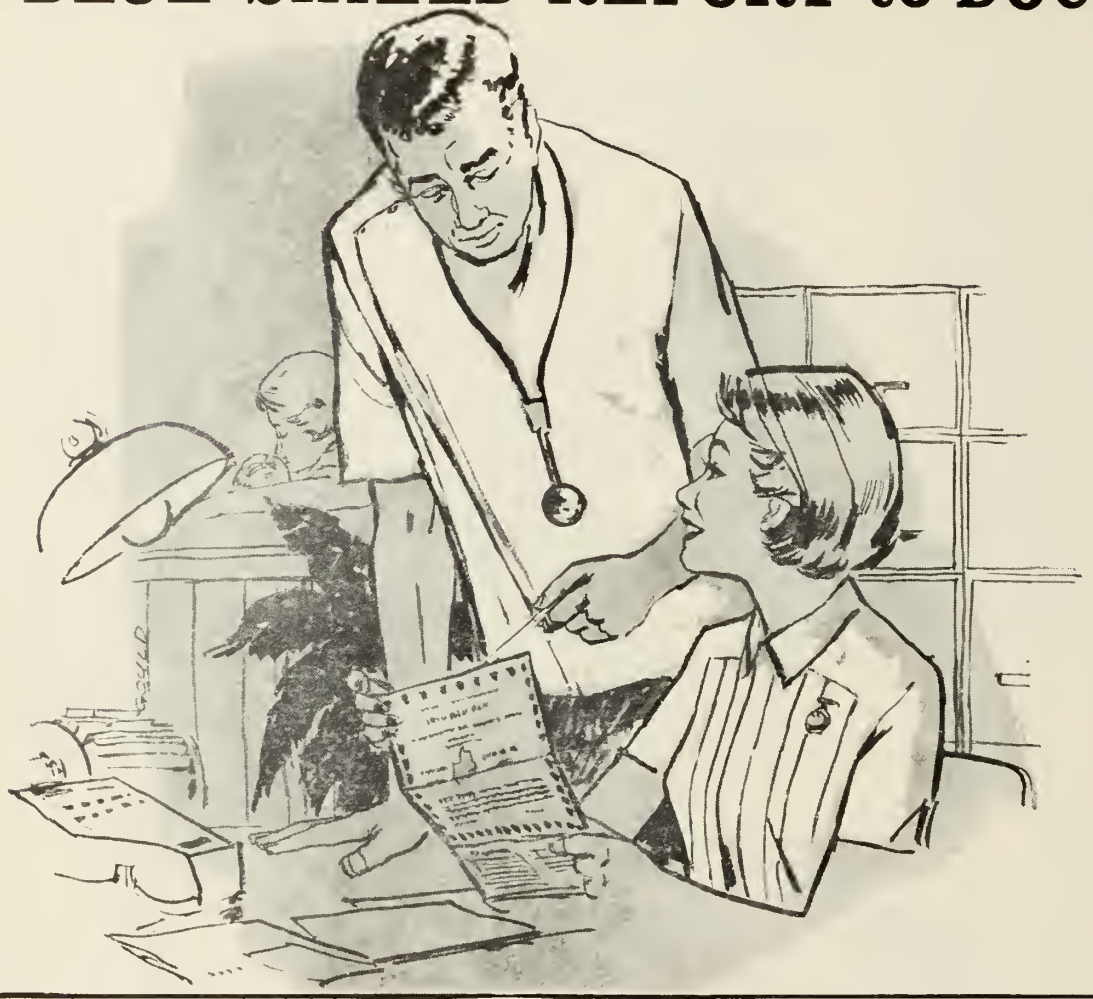
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REPORT # 22

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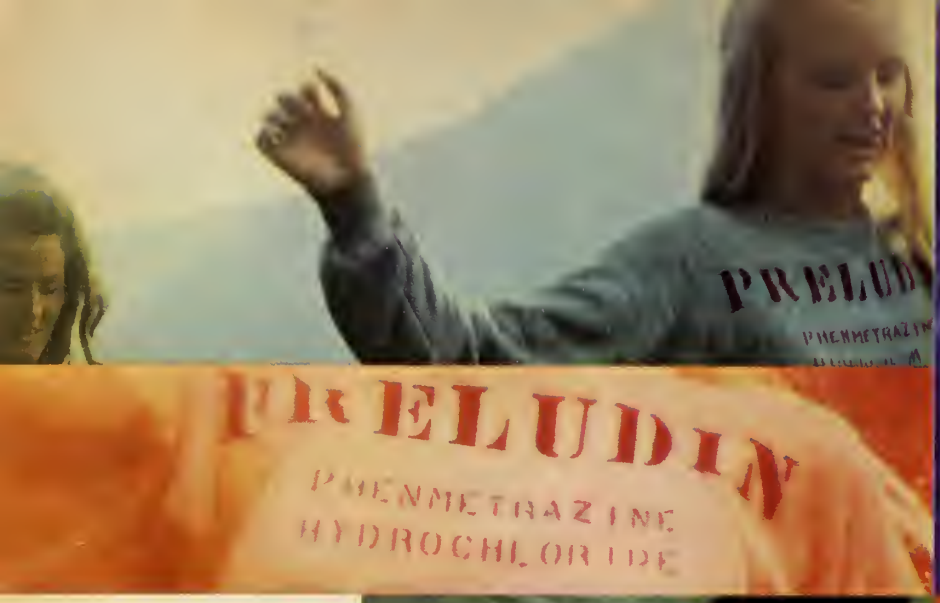
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Warning: Do not use during the first trimester of pregnancy unless potential benefits outweigh possible risks. There have been clinical reports of congenital malformation, but causal relationship has not been proved. Animal teratogenic studies have been inconclusive.
Precautions: Use with caution in moderate hypertension and cardiac decompensation. Cases involving abuse of or dependence on phenmetrazine hydrochloride have been reported. In general, these cases were characterized by excessive consumption of the drug for its central stimulant effect, and have resulted in a psychotic illness manifested by restlessness, mood or behavior changes, hallucinations or delusions. Do not exceed recommended dosage.
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WARNINGS: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering Librium (chlordiazepoxide hydrochloride) to known addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards. As with all anticholinergic drugs, an inhibiting effect on lactation may occur.

PRECAUTIONS: In elderly and debilitated, limit dosage to smallest effective amount to preclude development of ataxia, oversedation or confusion (not more than two capsules per day initially; increase gradually as needed and toler-

or here.



ated). Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (*e.g.*, excitement, stimulation and acute rage) have been reported in psychiatric patients. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

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PRESCRIBING INFORMATION. For complete information consult Official Package Circular. **Indications:** Infections due to susceptible strains of Gram-negative bacteria (including Shigellae, *S. typhosa* and other Salmonellae, *E. coli*, *H. influenzae*, *P. mirabilis*, *N. gonorrhoeae* and *N. meningitidis*) and Gram-positive bacteria (including streptococci, pneumococci and nonpenicillinase-producing staphylococci). **Contraindications:** A history of allergic reactions to penicillins or cephalosporins and infections due to penicillinase-producing organisms. **Precautions.** Typical penicillin-allergic reactions may occur, especially in hypersensitive patients. Mycotic or bacterial superinfections may occur. Experience in newborn and premature infants is limited and caution should be used in treatment, with frequent organ function evaluations. Safety for use in pregnancy is not established. In gonorrheal therapy, serologic tests for syphilis should be performed initially and monthly for 4 months. Assess renal, hepatic and hematopoietic function intermittently during long-term therapy. **Adverse Reactions:** Skin rash, pruritus, urticaria, nausea, vomiting, diarrhea and anaphylactic reactions. Mild transient elevations of SGOT or SGPT have been noted. Black tongue has been noted in some patients receiving the Chewable Tablets. **Usual Dosage:** Adults—250 or 500 mg. q. 6 h. (according to infection site and offending organisms). Children—50-100 mg./Kg./day in 3 to 4 divided doses (depending on infection site and offending organisms). Bacterial meningitis —150-200 mg./Kg./day in 6 to 8 divided doses. Children weighing more than 20 Kg. should be given an adult dose when prescribing orally. In parenteral administration, children weighing more than 40 Kg. should be given an adult dose. Beta-hemolytic streptococcal infections should be treated for at least 10 days. **Supplied:** Capsules—250 mg. in bottles of 24 and 100. 500 mg. in bottles of 16 and 100. For Oral Suspension—125 mg./5 ml. in 60, 80 and 150 ml. bottles. 250 mg./5 ml. in 80 and 150 ml. bottles. Chewable Tablets—125 mg. in bottles of 40. Injectable—for I.M./I.V. use—vials of 125 mg., 250 mg., 500 mg., and 1 Gm. Pediatric Drops—100 mg./ml. in 20 ml. bottles.

11-1/2/69 **A.H.F.S. Category 8:12.16**

Polycillin®
(ampicillin trihydrate)

BRISTOL LABORATORIES
Division of Bristol-Myers Co.
Syracuse, New York 13201

BRISTOL

The penicillin you use like a broad-spectrum antibiotic



Help the Needy!

This patient may appear to "have everything" but, like so many people getting along in years, she may well be in need—*medically*. Though there is no evidence of organic disease, she does have symptoms (fatigue, vague aches and pains, malaise) that may be indicative of—

a need to maintain anabolic balance... to counteract declining gonadal hormone secretion and forestall premature degenerative changes related to estrogen deficiency;

a need for mood elevation... to impart a gentle emotional uplift;

a need for nutritional supplementation... to compensate for the poor eating habits and subsequent dietary insufficiency of so many older people.

For these needs, consider MEDIATRIC for your next "needy" patient... medically.

MEDIATRIC provides specific agents to fulfill a need in the three areas:

1. **Gonadal steroids** [PREMARIN® (conjugated estrogens-equine), an orally active, natural estrogen, and methyltestosterone] for physiologic and metabolic benefits.

2. **Methamphetamine** to provide gentle elevation of mood.

3. **Nutritional supplements** specially selected to meet the requirements of the elderly individual.

Mediatric®

tablets • capsules • liquid

Steroid-nutritional compound

	Each MEDIATRIC® Tablet or Capsule contains:	Each 15 cc. (3 teaspoonfuls) of MEDIATRIC® Liquid contains:
Conjugated estrogens-equine (PREMARIN®)	0.25 mg.	0.25 mg.
Methyltestosterone	2.5 mg.	2.5 mg.
Methamphetamine HCl	1.0 mg.	1.0 mg.
Cyanocobalamin	2.5 mcg.	1.5 mcg.
Intrinsic factor concentrate	8.0 mg.	—
Thiamine HCl	—	5.0 mg.
Thiamine mononitrate	10.0 mg.	—
Riboflavin	5.0 mg.	—
Niacinamide	50.0 mg.	—
Pyridoxine HCl	3.0 mg.	—
Calcium pantothenate	20.0 mg.	—
Ferrous sulfate exsic.	30.0 mg.	—
Ascorbic acid	100.0 mg.	—
		Contains 15% alcohol† †Some Loss Unavoidable.

Contraindication: Carcinoma of the prostate, due to methyltestosterone component.

Warning: Some patients with pernicious anemia may not respond to treatment with the Tablets or Capsules, nor is cessation of response predictable. Periodic examinations and laboratory studies of pernicious anemia patients are essential and recommended.

Side Effects: In addition to withdrawal bleeding, breast tenderness or hirsutism may occur.

Suggested Dosages: *Male and female*—1 Tablet or Capsule, or 3 teaspoonfuls Liquid, daily or as required.

In the female: To avoid continuous stimulation of breast and uterus, cyclic therapy is recommended (3 week regimen with 1 week rest period—Withdrawal bleeding may occur during this 1 week rest period).
In the male: A careful check should be made on the status of the prostate gland when therapy is given for protracted intervals.

Supplied: No. 752—MEDIATRIC Tablets, in bottles of 100 and 1,000.
No. 252—MEDIATRIC Capsules, in bottles of 30, 100, and 1,000.
No. 910—MEDIATRIC Liquid, in bottles of 16 fluidounces.

AYERST LABORATORIES
New York, N.Y. 10017 • Montreal, Canada
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The AMBAR SCRAPBOOK of Obesity Oddities
FACT & LEGEND



CONTROL FOOD AND MOOD ALL DAY LONG WITH A SINGLE MORNING DOSE

AMBAR #2 EXTENTABS®

methamphetamine HCl 15 mg., phenobarbital 64.8 mg. (1 gr.) (Warning: may be habit forming).

One Ambar Extentab before breakfast can help control most patients' appetite for up to 12 hours. Methamphetamine, the appetite suppressant, gently elevates mood and helps overcome dieting frustrations. Phenobarbital, the sedative in Ambar, controls irritability and anxiety... helps maintain a state of mental calm and equanimity. Both work together to ease the tensions that erode the willpower during periods of dieting.

Also available: Ambar #1 Extentabs®—methamphetamine hydrochloride 10 mg., phenobarbital 64.8 mg. (1 gr.) (Warning: may be habit forming).

BRIEF SUMMARY/**Indications:** Ambar suppresses appetite and helps offset emotional reactions to dieting. **Contraindications:** Hypersensitivity to barbiturates or sympathomimetics; patients with advanced renal or hepatic disease. **Precautions:** Administer with caution in the presence of cardiovascular disease or hypertension. **Side Effects:** Nervousness or excitement occasionally noted, but usually infrequent at recommended dosages. Slight drowsiness has been reported rarely. See package insert for further details.

A. H. ROBINS COMPANY, RICHMOND, VA. 23220 A·H·ROBINS

heavenly relief
for unearthly cough

Benylin®
EXPECTORANT



Each fluidounce contains: 80 mg. Benadryl® (diphenhydramine hydrochloride, Parke-Davis); 12 grains ammonium chloride; 5 grains sodium citrate; 2 grains chloroform; 1/10 grain menthol; and 5% alcohol.

An antitussive and expectorant for control of coughs due to colds or of allergic origin, BENYLIN EXPECTORANT is the leading cough preparation of its kind. BENYLIN EXPECTORANT tends to inhibit cough reflex... soothes irritated throat membranes. And its not-too-sweet, pleasant raspberry flavor makes BENYLIN EXPECTORANT easy to take.

PRECAUTIONS: Persons who have become drowsy on this or other antihistamine-containing drugs, or whose tolerance is not known, should not drive vehicles or engage in other activities requiring keen response while using this preparation. Hypnotics, sedatives, or tranquilizers if used with BENYLIN EXPECTORANT should be prescribed with caution because of possible additive effect. Diphenhydramine has an atropine-like action which should be considered when prescribing BENYLIN EXPECTORANT.

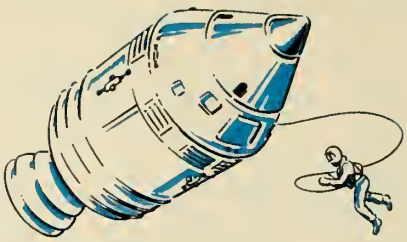
ADVERSE REACTIONS: Side reactions may affect the nervous, gastrointestinal, and cardiovascular systems. Drowsiness, dizziness, dryness of the mouth, nausea, nervousness, palpitation, and blurring of vision have been reported. Allergic reactions may occur.

PACKAGING: Bottles of 4 oz., 16 oz., and 1 gal.

Parke, Davis & Company
Detroit, Michigan 48232

PARKE-DAVIS

41OR69



Man in space, now fait accompli, re-emphasizes the importance of Uro-Phosphate therapy. Research into the effect of space travel on the astronaut reveals that weightlessness causes loss of bone calcium. As the bones are required to bear less and less of the weight of the body they lose calcium, increasing the calcium content of the urine. When physical activity is reduced, the acidity of the urine should be adjusted to keep increased calcium in solution . . . . a prophylaxis to prevent kidney or bladder calculi.

Uro-Phosphate®

NOW A SUGAR-COATED TABLET

Each tablet contains: METHENAMINE, 300 mg.; SODIUM ACID PHOSPHATE, 500 mg.

Uro-Phosphate gives comfort and protection when inactivity causes discomfort in the urinary function. It keeps calcium in solution, preventing calculi; it maintains clear, acid, sterile urine; it encourages complete voiding and lessens frequency when residual urine is present.

Uro-Phosphate contains sodium acid phosphate, a natural urinary acidifier. This component is fortified with methenamine which is inert until it reaches the acid urinary bladder. In this environment it releases a mild antiseptic keeping the urine sterile.

Uro-Phosphate is safe for continuous use. There are no contra-indications other than acidosis. It can be given in sufficient amount to keep the urine clear, acid and sterile. A heavy sugar coating protects its potency.

Dosage:

For protection of the inactive patient 1 or 2 tablets every 4 to 6 hours is usually sufficient to keep the urine clear, acid and sterile.

2 tablets on retiring will keep residual urine acid and sterile, contributing to comfort and rest.

A clinical supply will be sent to physicians and hospitals on request.

WILLIAM P. POYTHRESS & COMPANY, INC., RICHMOND, VIRGINIA 23217

Manufacturers of Ethical Pharmaceuticals



"The inconvenience of a cold"

For a cold, NTz® Nasal Spray provides rapid relief of nasal symptoms. Relief starts with the first spray which opens the inferior part of the common meatus. A second spray, a few minutes later, will shrink the turbinates to help provide sinus drainage and ventilation. Dosage may be repeated every three or four hours as needed, for temporary relief of symptoms. NTz is well tolerated but overdosage should be avoided.

As a sinusitis deterrent, NTz Nasal Spray can be used to keep the nasal passages open during a cold to help prevent development of acute sinusitis—or to help prevent the acute condition from becoming chronic.

Supplied: NTz Nasal Spray, plastic squeeze bottles of 20 ml.; NTz Nasal Solution, bottles of 30 ml. (1 fl. oz.) with dropper.

NTz is more than a simple vasoconstrictor. It contains

Neo-Synephrine® (brand of phenylephrine) HCl 0.5 per cent, the major component, virtually synonymous with fast, efficient but gentle nasal vasoconstriction.

Thenfadil® (brand of thenyldiamine) HCl 0.1 per cent, topical antihistamine for reduction of rhinorrhea, sneezing or itching. It combats the allergic reactions that may occur in colds or sinusitis.

Zephiran® (brand of benzalkonium, as chloride, refined) 1:5000, antiseptic preservative and wetting agent to promote penetration and spread of the formula.



Winthrop Laboratories, New York, N.Y. 10016 Winthrop



THE BETTMAN ARCHIVE

Just one tablet at bedtime • Prevents painful night leg cramps • Permits restful sleep

How many of your patients stamp their feet at night and lose sleep because of painful leg cramps? Unless prompted, they usually fail to report this distressing condition and suffer needlessly.

One tablet of QUINAMM at bedtime usually controls distressing night cramps and permits restful sleep with the initial dose.

Prescribing information—Composition: Each white, beveled, compressed tablet contains: Quinine sulfate, 260 mg., Aminophylline, 195 mg. **Indications:** For the prevention and treatment of nocturnal and recumbency leg muscle cramps, including those associated with arthritis, diabetes, varicose veins, thrombophlebitis, arteriosclerosis and static foot deformities. **Contraindications:** QUINAMM is contraindicated in pregnancy because of its quinine content. **Side Effects/Precautions:** Aminophylline may produce intestinal cramps in some instances, and quinine may produce symptoms of cinchonism, such as tinnitus, dizziness, and gastrointestinal disturbance. Discontinue use if ringing in the ears, deafness, skin rash, or visual disturbances occur. **Dosage:** One tablet upon retiring. Where necessary, dosage may be increased to one tablet following the evening meal and one tablet upon retiring. **Supplied:** Bottles of 100 and 500 tablets.

THE NATIONAL DRUG COMPANY
DIVISION OF RICHARDSON MERRELL INC.
PHILADELPHIA, PENNSYLVANIA 19144

ANTISECRETORY SEDATIVE

Antrocol

Antrocol provides the prompt, predictable antisecretory action of the belladonna alkaloid, atropine, fortified with sedation and blended with Bensulfoid, contributing to slow, even absorption.

Each Antrocol tablet or capsule contains 0.324 mg. of atropine sulfate, which is twenty-four thousandths of a milligram more than the smallest effective dose specified in U.S.P., Vol. 17. This slight increase in the smallest effective dose of the antisecretory factor (atropine) is all the average patient can tolerate without discomfort.

One Antrocol tablet or capsule taken three times daily lessens emotional stress and maintains a gastric function that is not conducive to the development of peptic ulcer.

Antrocol is also useful in the treatment of peptic ulcer. Dosage up to 8 tablets or capsules per day to obtain the desired antisecretory titer. When ulcer has healed, one Antrocol tablet or capsule morning and evening gives protection against recurrence.

Each tablet or capsule contains:

Atropine Sulfate	0.324 mg.
Phenobarbital (may be habit forming)	16 mg.
Bensulfoid, see white section P.D.R.	65 mg.

Side-effects: Toxic levels of atropine may produce flushing, dry mouth, blurred vision, tachycardia, or urinary retention. Precautions: Do not use in glaucoma. Use cautiously in prostatic hypertrophy.

Federal law prohibits dispensing without prescription.

WILLIAM P. POYTHRESS & CO., INC.
RICHMOND, VIRGINIA 23217
Manufacturers of ethical pharmaceuticals since 1856

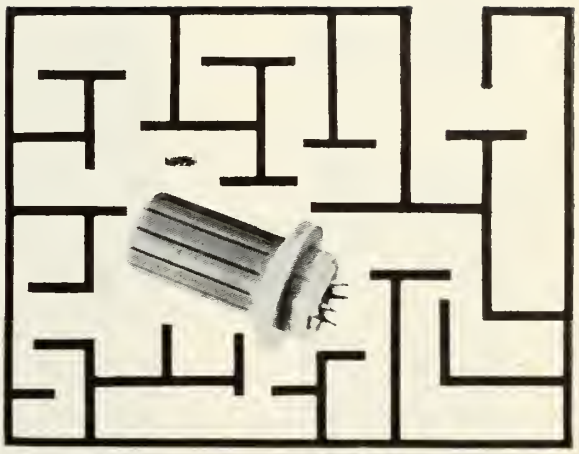
Antrocol®

ANTISECRETORY SEDATIVE

IF ADVERTISED

IN THE JOURNAL

IT IS GOOD



HISTO IS CONFUSING.

Histoplasmosis can mimic such unrelated diseases as TB, leukemia, pneumonia and syphilis. Use the blue Histoplasmin LEDERTINE™ Applicator as the first step in differential diagnosis and as a routine step in physical examinations for the permanent records of your patients.

HISTOPLASMIN, TINE TEST
(Rosenthal)

Precautions—Nonspecific reactions are rare, but may occur. Vesiculation, ulceration or necrosis may occur at test site in highly sensitive persons. The test should be used with caution in patients known to be allergic to acacia, or to thimerosal (or other mercurial compounds).

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A Division of American Cyanamid Company, Pearl River, New York
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MAINE MEDICAL ASSOCIATION

DOW & PINKHAM

107 EXCHANGE STREET, PORTLAND

D&P
AN ANCHOR TO WINDWARD

Symbols in a life of psychic tension

B.A.
cum laude

V.P.
at thirty-two

ECG
and complete examination normal (persistent palpitations)



ROCHE
Roche
LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110



Rx

Valium® (diazepam) *t.i.d.* and *h.s.*

B.A. (*cum laude*)...V.P. (at thirty-two)...symbols that illuminate the quality of a life...the satisfactions of achievement, as well as its price...the pressures and stresses that can often create cardiac manifestations of psychic tension. For this kind of patient—with no demonstrable pathology—consider the singular benefits of Valium (diazepam).

With its pronounced calming action, Valium can relieve psychic tension promptly, attenuating its somatic signs and symptoms. Further, Valium is distinctly useful when somatic and depressive symptomatology (secondary to psychic tension) coexist. And Valium is generally well tolerated; in proper maintenance dosage, it seldom dulls the senses or interferes with functioning.

When psychic tension-related insomnia appears, an *h.s.* dose added to the *t.i.d.* schedule helps promote sleep.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms have occurred following abrupt discontinuance. Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation, have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

Valium® (diazepam)

2-mg, 5-mg, 10-mg tablets *t.i.d.* or *q.i.d.*

to help relieve psychic tension
and its somatic symptoms

It's almost as if you were there to give an injection of penicillin



V-Cillin K®, Pediatric dependable oral penicillin therapy

Potassium Phenoxymethyl Penicillin

Description: V-Cillin K, the potassium salt of V-Cillin® (phenoxymethyl penicillin, Lilly), combines acid stability with immediate solubility and rapid absorption. Higher, more rapid serum levels are obtained than with equal oral doses of penicillin G.

Indications: Streptococcus, pneumococcus, and gonococcus infections; infections caused by sensitive strains of staphylococci; prophylaxis of streptococcus infections in patients with a history of rheumatic fever; and prevention of bacterial endocarditis after tonsillectomy and tooth extraction in patients with a history of rheumatic fever or congenital heart disease.

Contraindication: Penicillin hypersensitivity.

Warnings: In rare instances, penicillin may cause acute anaphylaxis which may prove fatal unless promptly controlled. This type of reaction appears more frequently in patients with a history of sensitivity reactions to penicillin or with bronchial asthma or other allergies. Resuscitative drugs should be readily available. These include epinephrine and pressor drugs (as well as oxygen for inhalation) for immediate allergic manifestations and antihistamines and corticosteroids for delayed effects.

Precautions: Use cautiously, if at all, in a patient with a strongly positive history of allergy.

In prolonged therapy with penicillin, and particularly with high parenteral dosage schedules, frequent evaluation of the renal and hematopoietic systems is recommended.

In suspected staphylococcus infections, proper laboratory studies (including sensitivity tests) should be performed.

The use of penicillin may be associated with the overgrowth of penicillin-insensitive organisms. In such cases, discontinue administration and take appropriate measures.

Adverse Reactions: Although serious allergic reactions are much less common with oral penicillin than with intramuscular forms, manifestations of penicillin allergy may occur.

Penicillin is a substance of low toxicity, but it possesses a significant index of sensitization. The following hypersensitivity reactions have been reported: skin rashes ranging from maculopapular eruptions to exfoliative dermatitis; urticaria; and reactions resembling serum sickness, including chills, fever, edema, arthralgia, and prostration. Severe and often fatal anaphylaxis has occurred (see Warnings). Hemolytic anemia, leukopenia, thrombocytopenia, and nephropathy are rarely observed side-effects and are usually associated with high parenteral dosage.

Administration and Dosage: Usual dosage range, 125 mg. (200,000 units) three times a day to 500 mg. (800,000 units) every four hours. For infants, 50 mg. per Kg. per day divided into three doses.

See package literature for detailed dosage instructions for prophylaxis of streptococcus infections, surgery, gonorrhea, and severe infections.

How Supplied: Tablets V-Cillin K® (Potassium Phenoxymethyl Penicillin Tablets, U.S.P.), 125 mg. (200,000 units), 250 mg. (400,000 units), and 500 mg. (800,000 units).

V-Cillin K® (potassium phenoxymethyl penicillin, Lilly), Pediatric, for Oral Solution, 125 mg. (200,000 units) and 250 mg. (400,000 units) per 5 cc. of solution (approximately one teaspoonful). [042567A]

900134

Additional information available to physicians upon request.

Eli Lilly and Company, Indianapolis, Indiana 46206

Lilly

A New Surgical Approach To Traumatic Injuries Of The Liver

ABRAHAM KAPLAN, M.D., F.A.C.S.*

Since the first reported case of surgical repair of a traumatic injury to the liver by Bruns[1] in 1870, the surgical attack upon the liver has gained increasing impetus. A refinement of surgical technique coupled with a more thorough understanding of hepatic physiology have immensely contributed to the arousal and development of the interest for hepatic surgery. However, bleeding still constitutes the single most important technical difficulty in liver resections.

Considerable ingenuity has been displayed through the years in attempting to solve this problem. Needless to say, the existence of so many ways to effect hemostasis of the liver parenchyma would certainly attest to their relative ineffectiveness. We became interested in this problem in 1965 and felt that the use of controlled portal and systemic hypotension could become a useful surgical adjunct in liver repair on resection; with that end in mind extensive experimental work was undertaken[2,3,4] to prove not only the applicability of this approach but its safety as well. Trimethaphan (Arfonad) and Pitressin® were the two drugs used for induction of systemic and portal hypotension respectively. We found that experimental animals are extremely sensitive to these drugs but human beings can be easily titrated and kept hypotensive for relatively long periods of time, Figs. 1-2. Gillies[5] referred to the techniques of induced hypotension as "a physiological trespass"; low levels of arterial blood pressure are undoubtedly abnormal when accompanied by either vasoconstriction or hypovolemia, but presently there is a considerable body of evidence, both experimental and clinical, that normovolemic hypotension "per se" is not a harmful phenomenon. In the specific case of the liver, the hemodynamic bicompartmental arrangement would seem to make this organ much less susceptible to the biochemical and functional derangements which usually follow hypotension and hypoxia. In our studies, Fig. 3, a baseline arterial oxygen saturation of 97% did not show any significant change after induction of hypotension, whereas the venous saturation fell sharply from an average of 79% to an average of 57%. A slight reduction of pH from 7.5 to 7.3

*Surgeon, Central Maine General Hospital, Lewiston, Maine 04240.

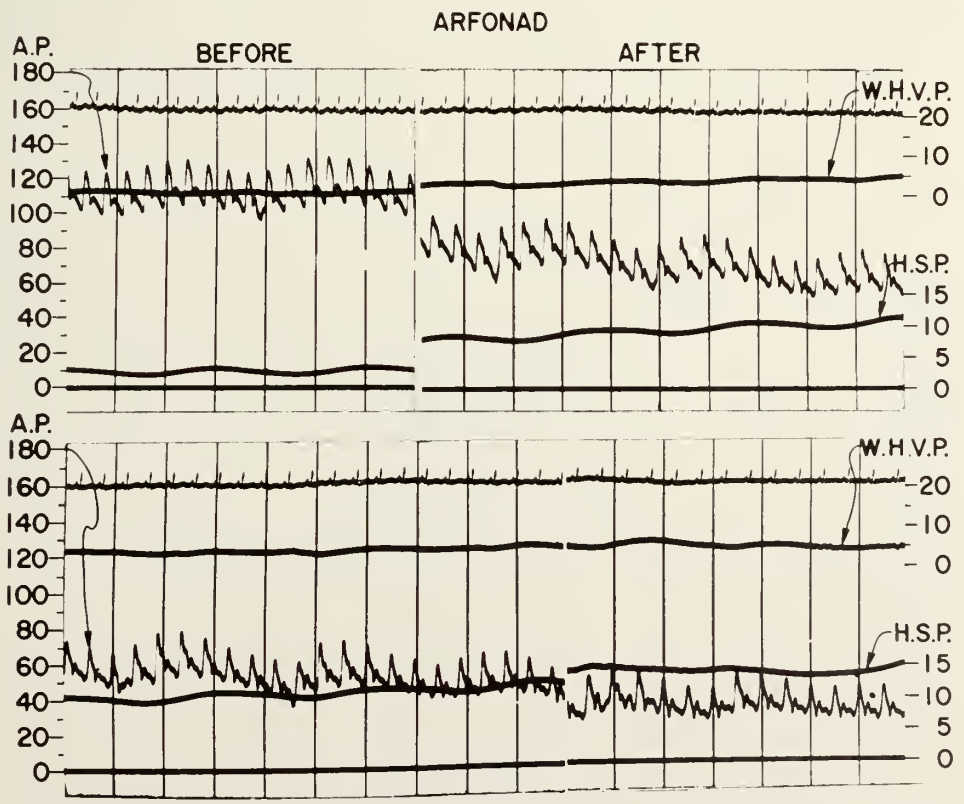


Fig. 1. Shows the effect of Arfonad on arterial pressure (AP), wedge hepatic vein pressure (W.H.V.P.) and liver sinusoids (H.S.P.).

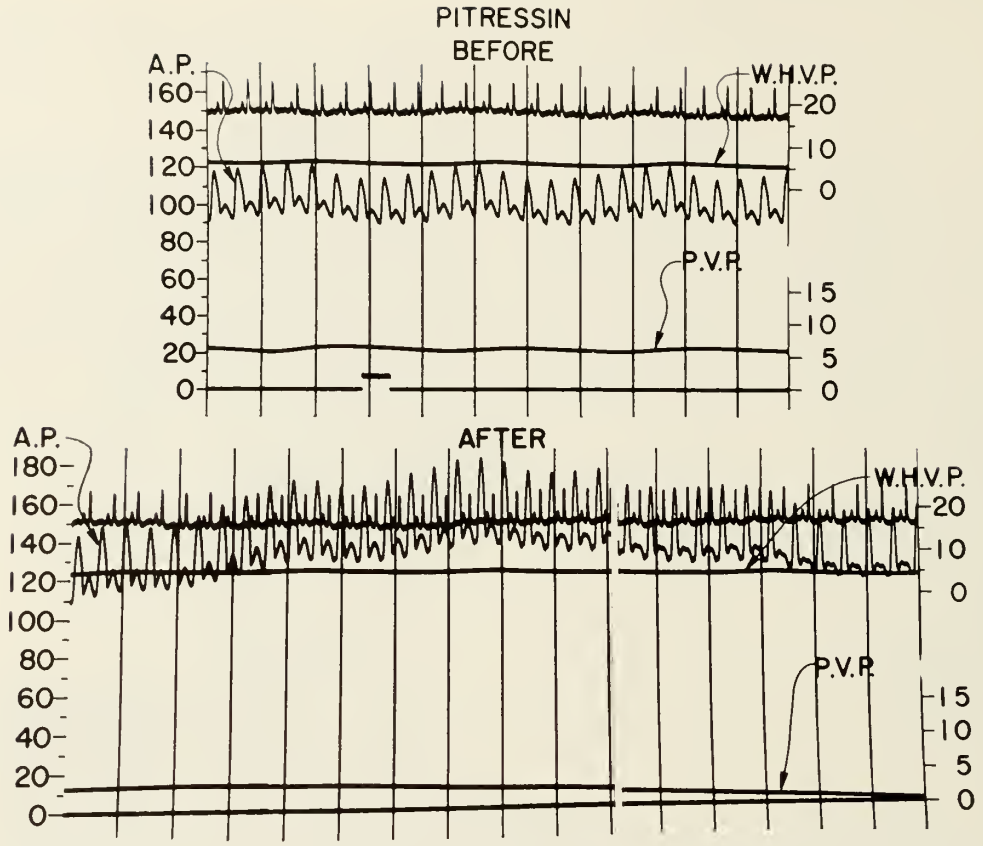


Fig. 2. Depicts the effect of Pitressin on arterial pressure (AP), wedge hepatic vein pressure (W.H.V.P.) and portal vein pressure (P.V.P.).

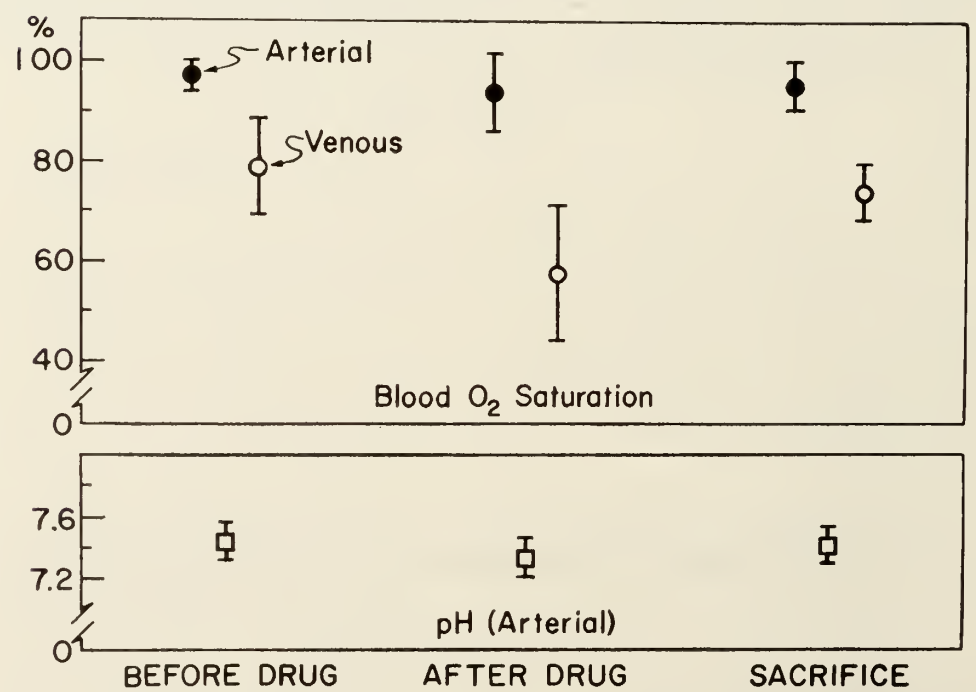


Fig. 3. Blood O_2 saturation and pH changes following induction of controlled hypotension.

was also observed. Liver profiles, Fig. 4, which were started on the first postoperative day and continued for one month, revealed few and transient changes: decrease of total protein and albumin fraction with restoration of normal values during the second week following surgery. Bilirubin, alkaline phosphatase, SGOT and BSP retention were slightly elevated but returned to baseline levels at the end of the second week. Blood volumes showed a reduction of 7% when induced hypotension was used; conversely when liver resections were done under normotensive conditions blood volumes fell 42% in the first 24 hours.

When Arfonad was injected, Fig. 5, experimentally the systemic blood pressure was allowed to drop to a systolic of 60 mm. of Hg, clinically it was kept at a level of 80 to 85. Simultaneously the hepatic artery flow dropped from 160 ml./min. to 40 ml./min. Concomitantly with the sharp decline of blood pressure and hepatic flow there was a rise of the vascular resistance with a subsequent downhill trend reaching levels below baseline. As depicted in Fig. 5 Arfonad has a completely different effect on the portal compartment with marked increase of portal pressure, more than doubling the vascular resistance in that compartment. This hemodynamic disparity emphasizes the importance, almost the inevitability of the combined administration of an agent which, added to Arfonad, would influence and favorably modify the kinetics of the portal compartment. For this purpose Pitressin was used, the effect of which is shown in Fig. 6. A word of caution should be interjected regarding the use of Pitressin which may be inadvisable in the

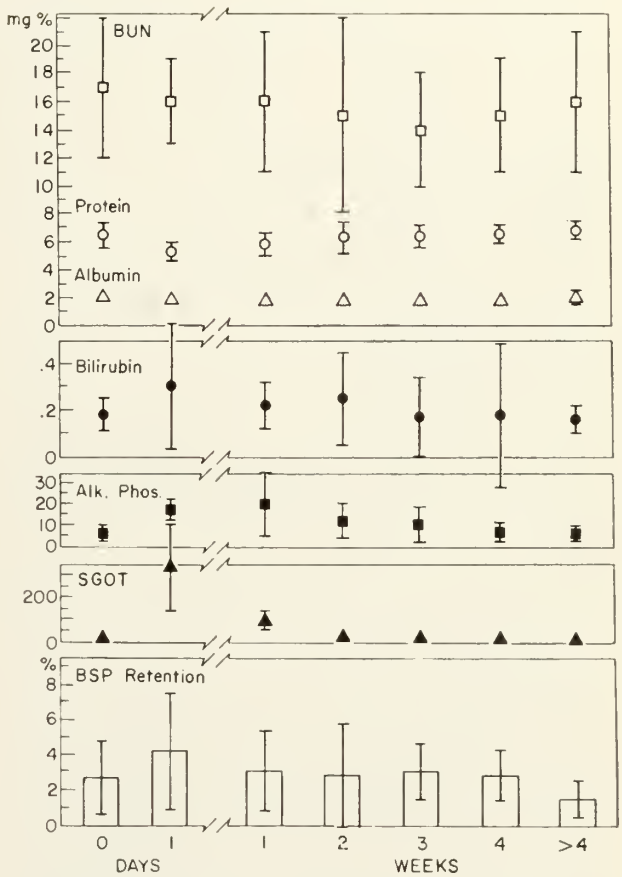


Fig. 4. Transient changes of liver profiles following liver resection under controlled portal and systemic hypotension.

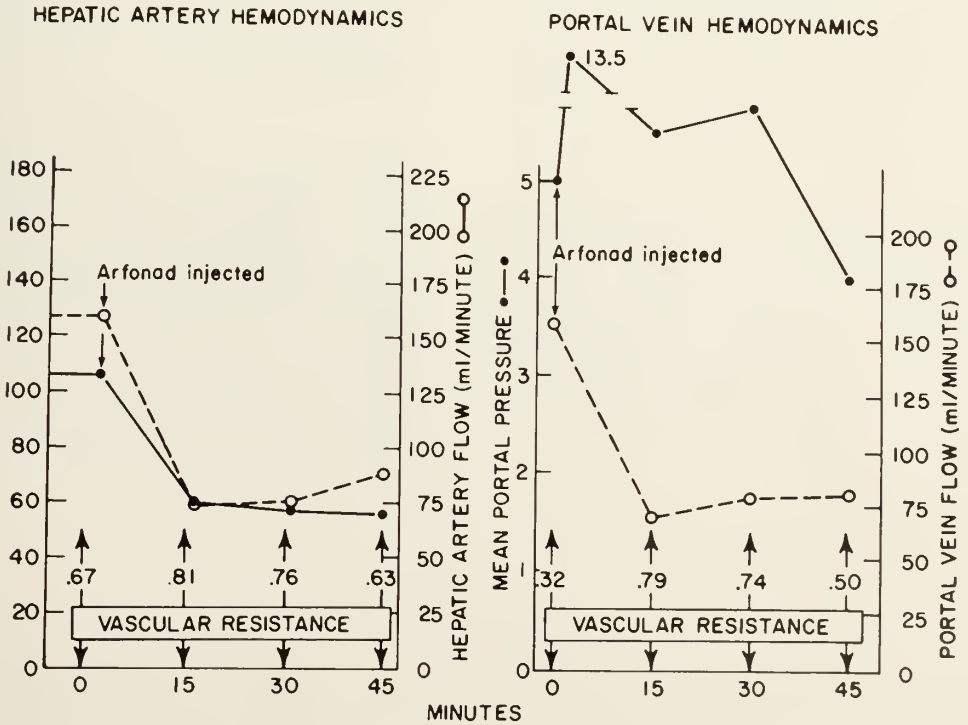


Fig. 5. Hemodynamic changes in the hepatic artery and portal vein compartments following the administration of Arfonad.

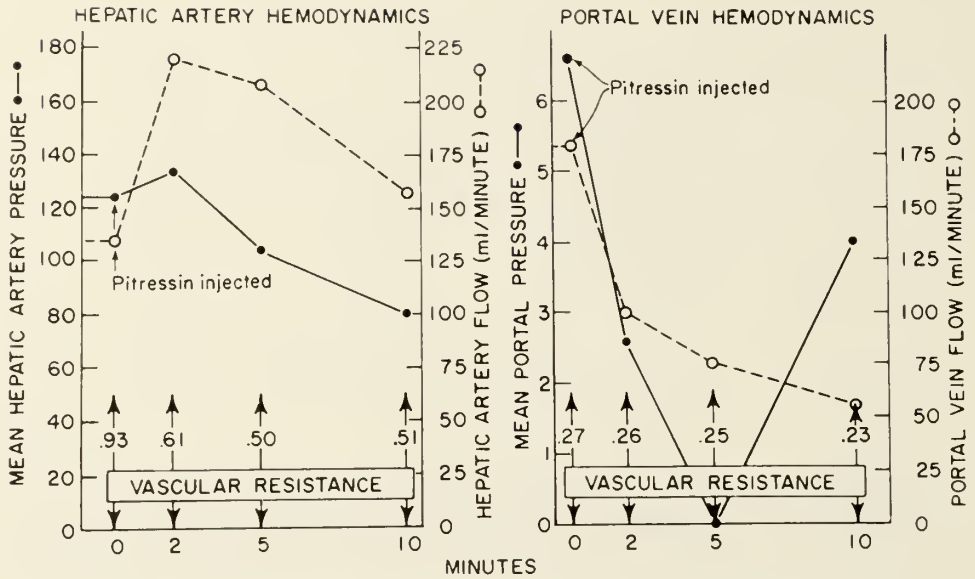


Fig. 6. Hemodynamic changes observed following the injection of Pitressin.

very elderly and in patients with known coronary disease. This drug has been used extensively in the treatment of bleeding esophageal varices. Estimates of its efficiency vary from 25 to 40% success, with an additional 16% of good results when combined with esophageal tamponade. Dosage has varied from 20 to 50 units given by intravenous drip over periods ranging from 5 to 20 minutes. Mild elevation of blood pressure was noted but the remote danger of coronary artery constriction is always present. We have seen coronary constriction lead to myocardial infarction and death in one elderly patient treated with Pitressin. However, 20 units of Vasopressin administered over 20 minutes is harmless to an otherwise fit and healthy individual with traumatic rupture of the liver in spite of possible cardiovascular effects.

In summary, confronted with a hepatic resection the surgeon has the choice of two technical modalities; one is resection disregarding anatomical guidelines and the other is an anatomical and selective extirpation of compromised parenchyma. It would seem that the latter procedure can only be used under ideal circumstances when structural changes secondary to trauma or cancer are such that no irreparable distortion of the normal anatomy has been inflicted. This, as it seems to us and to others, is not the usual case, particularly in liver injury, where massive rupture is found in 25% of all cases.[6] Repair or partial hepatectomy under these circumstances can usually be better accomplished by disregarding topographical landmarks. Since severe bleeding is perhaps the single most troublesome technical difficulty encountered, the modality herein described of controlled portal and systemic hypotension, would seem an acceptable method for this group of patients in whom the distortion of the anatomy and the urgency of the circumstances would hardly allow for more refined and sophisticated measures, namely a slow and laborious dissection of architectural landmarks.

References

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Editorial

Medical Education For Maine

It has become increasingly apparent that Maine's needs for adequate health care can be met only by a Maine medical school. The development of such a school will provide convenient means for Maine youth to pursue medical careers. It will also demonstrate that Maine has accepted responsibility for the education of its own physicians and will no longer depend completely on the generosity of its sister states. Its economic impact, despite fears to the contrary, can be most favorable to the state.

The hospitals affiliated with the medical school will provide excellent postgraduate training at the internship and residency levels which will fulfill the needs of Maine Medical School graduates and will attract graduates from other schools.

The forty to fifty new physicians who must be recruited yearly to maintain and improve the standards of medical care in this state will be easily attracted.

The proposed medical school will be a hub from which the best and latest of medical ideas can spread to physicians and hospitals thus providing the capstone for regional health care planning and achieving the best possible patient care throughout the state.

It will provide a foundation for schools in supporting health services.

It will be a center to which Maine people can come with obscure and difficult diseases for the most sophisticated diagnostic and therapeutic techniques, now beyond the resources of most community hospitals and, in the near future, beyond the resources of all community hospitals.

It can be a center in which patients from other states and countries may find care superior to that at home.

The need for such a school was apparent to our state over 100 years ago. The Maine Medical School at Bowdoin was created by act of the first Maine legislature in 1820. It was closed in 1921 because Bowdoin College did not have the financial resources for improvements necessary for continued accreditation and the Maine legislature would not provide them.

It has now become a widely accepted belief that most of these expenses must be borne by the population at large if this important health need is to be met. Therefore, substantial federal funds have now been made available for the building and operating expenses of medical school health centers.

A feasibility survey by Dr. John Truslow in 1965 pointed out needs that must be met before a medical school was feasible. Those needs which have not been met are in the process of being met and will, where possible, be completely met by the time a medical school can be established.

Since the Truslow study, the impact of Medicare legislation and implementation has created an increasing health personnel shortage which can only become worse without a medical school.

In the next two to four years a medical school program can be initiated. Accordingly, the 104th State Legislature has before it the following bill which I feel deserves your support:

Whereas it appears that Maine's need for physicians and related health personnel can be guaranteed only by the establishment of a Maine Medical School:

Whereas the legislature has the right and duty to safeguard the health needs of Maine citizens:

Be it therefore enacted by the 104th Legislature the following:

1. A Medical School Commission shall be appointed to determine for the legislature the best location, suitable building plans and cost estimates for a four year medical school with teaching hospital; to gather such other facts as may be deemed pertinent to the creation of this medical school; and to determine also the related health schools that should be associated with the medical school.

2. This Commission shall consist of a chairman and eight other members: two physicians; a representative from the University of Maine faculty; a representative from the University of Maine Board of Trustees; a representative from the State House of Legislature, and one from the State Senate; and two other members not part of the above groups.

Charles A. Hannigan, M.D.
85 Goff Street
Auburn, Maine 04210

An Assessment of the Present Need for A Medical School in Maine

Charles A. Hannigan, M.D.

Since the Maine Medical School was closed in 1921 there have been periodic attempts to develop a new medical school. In 1931, the Bingham Associates Program of Maine was set up to offer postgraduate medical training to Rumford physicians, utilizing visiting Boston clinicians at the Rumford Community Hospital. Patients with difficult problems, who could not be cared for in Rumford, were transferred to the Boston Dispensary for care. Later, the Central Maine General Hospital in Lewiston was included in the arrangement and patients requiring more sophisticated techniques than those available at the Central Maine General Hospital were also transferred to the Boston Dispensary.

Consideration of a medical school in Maine, sponsored by the Bingham Associates, was felt impractical due to transportation limitations and this system of regional medical care was offered as a substitute for improving the quality of medical care in rural Maine.

Eventually the Bingham Associates Program was enlarged to serve most of Maine and other areas of New England to their great benefit and to the continued growth of the Boston based hospital centers which, with the addition of the Joseph Pratt Diagnostic Hospital and the Farnsworth Surgical Hospital, comprise the major hospitals of the present New England Medical Center Hospitals.

Despite the efforts of the Bingham Associates, the Maine Medical Association and other concerned parties, there has been an ever increasing unmet need for physicians and related health personnel in Maine. This is due to the ever increasing demand for medical care by an aging population, the increasing numbers of personnel needed to supply more complicated services and a decrease in the numbers of these personnel.

Accordingly, there have been periodic attempts to develop a Maine Medical School as a definitive means to better health care throughout the state.

Dr. Edward C. Herlihy of Bangor was active in attempts to start a medical school in 1944 to 1948. Always, Dr. Daniel Hanley has been receptive and cooperative in these attempts. A two-year medical school received the support of Dr. Lloyd Elliott, then president of the University of Maine, but consideration of a two-year medical school came at a time when most two-year schools were expanding to four-year programs and the two-year school plan was not accomplished.

In 1965, the 102nd Legislature ordered a Medical School Feasibility Study through its Legislative Research Committee. The study was conducted by Dr. John Truslow who indicated the steps necessary for a medical school development, while at the same time indicating that increasing regionalization of medical care could accomplish many of the same goals a medical school would and at less expense.

These steps also included strengthening of the University of Maine undergraduate and predoctoral programs in health sciences while concentrating these programs in the Portland area which appeared to be the best location for a medical school hospital center. He emphasized the need to recruit students to medicine and related health fields and the means to accomplish this.

A Medical School and Services Study Committee was appointed to implement the Truslow report and gave these recommendations to the Legislative Research Committee of the 102nd Maine Legislature:

1. The Medical School and Services Study Committee accepts the goals and objectives advanced by Dr. Truslow, but recommends that for the present they be approached through existing agencies and facilities.

2. There was unanimous agreement to accept Dr. Truslow's recommendation that a medical school for Maine is not now feasible. We feel, however, that Maine eventually will have a medical school and that the needs of such a medical school should be taken into account in future higher education and health facilities planning.

3. We recommend for the present the continuation of a Medical School and Services Study Committee which should be made up of people knowledgeable in the background material and programs related to medical school development and health services. It should be available for advice to the Legislature and the Governor.

4. We recommend the establishment of an office of Coordinator and Planner for Health Affairs with appointment by and responsibility to the Governor of the state.

5. We recommend that the University of Maine strengthen existing undergraduate programs in the basic sciences, create two-year programs in the medical helping professions, and strengthen and expand related graduate programs.

6. We recommend that the University of Maine continue to increase as rapidly as conditions permit the programs offered in the Portland area.

7. We accept the idea put forth by the Academy of Educational Development for a state Higher Education Authority with the power to distribute Federal funds for programs at the state university and private colleges.

8. We urge the support of all reasonable measures which will improve the quality and availability of secondary school and higher education in the state.

9. We urge that the Legislature seek means of making fluoridization available to all Maine children since this single measure will do as much to improve dental care as doubling the number of dentists.

10. We urge the following measures to increase the number of Maine youth going into health career fields:

a. *Recruitment:* We feel that recruitment can be best carried out by the various health career fields. However, we urge the greater involvement of the State Department of Education in this area through dissemination of information in the secondary school system and through the cataloging of the various scholarships, loans and grants in the health career fields and through the continued use of the Educational Television services.

b. *Scholarships:* We recommend the broadening and expansion of the present state scholarship program to include the health career fields and to include also those in the health career fields who must go outside of the state to obtain training.

c. *Compact Plan:* We urge the expansion of the present compact plan to other recognized and needed health career fields and the inclusion of accredited schools outside of the New England area until the time such programs are available at the University of Maine.

d. *Loan Programs:* We feel that at this time we do not have sufficient information to make any recommendations on the need for a state loan program in the health career fields. This is a matter which merits further study. In the meantime, we suggest, as above, that the various loan, scholarship, and compact programs be widely publicized so that the families of youth interested in health career fields realize that any health career is within reach of the able student.

11. *Regionalization:* We favor regionalization as the primary responsibility of the hospitals and centers involved. However, the state has a valid interest and the progress of these programs should be reviewed at least every two years and reported to the Legislature.

12. *Postgraduate Training:* Likewise, we submit that this is the primary responsibility of the hospitals and centers involved, but that the state does have a valid interest. We do recommend continued availability of the state Educational Television system for postgraduate training. We also recommend that means of improving medical library facilities for Maine be investigated.

13. *Community Health Centers:* Here again, we feel that these should be established by the communities involved. However, we feel that the proposed office of Coordinator and Planner for Health Affairs should assist these communities.

14. *Foundations:* We feel that the state should reiterate its support and interest in private foundations and as a token of these should make available to each recognized health career field the Attorney General's office for advice and help in setting up such foundations.

15. *Evaluation of Health Personnel Needs:* We recommend that a continuing means for assessing the number and activity of those involved in health career fields be devised.

Since then there has been implementation in many of these areas, not necessarily as recommended, but along parallel lines to the same goals.

Maine's Regional Medical Program under the direction of Dr. Manu Chatterjee is shifting from a planning to an operational status.

The University of Maine is carrying out its indicated programs in health career fields and is evaluating other programs.

In two areas there are uncorrected deficiencies which can be corrected only by establishment of a medical school and therefore argue forcefully for prompt creation of a medical school.

The first is the need for increased recruits in medicine and allied health fields. The attempts to increase the number of Maine students entering medical schools have been imaginatively and forcefully pursued for the past fifteen years with discouraging results. However, there is a good likelihood that the presence, convenience and low cost of a state medical school will attract many of our Maine youth who otherwise might pursue teaching, engineering, law or maritime careers.

Regardless of how many additional Maine youth will be attracted to a Maine Medical School, it is certain that the majority of a seventy student class will be out of state students. Even if Maine supplied forty-five students to the entering classes of all medical schools instead of its present twenty, there would still be a majority of out of state students in the Maine Medical School.

However, the primary purpose of a Maine Medical School is to supply Maine with physicians and it can be expected from Vermont's experience that many of the out of state students will settle in Maine, particularly if they also serve their internships and residencies here. It can also be expected that the Medical School in full operation will bring in a faculty which will include at least seventy to eighty physicians who will add to existing medical man power. It further can be expected that the Medical School itself may initiate fruitful attempts to recruit students in the health career fields.

The second deficiency is to be found in the area of postgraduate educational opportunities at hospital centers in the state. This requires for its fullest potential an adequate supply of interns and residents if teaching and research are to complement patient care. Both the Central Maine General and Eastern Maine General Hospitals in the last fifteen years have failed to attract interns in adequate numbers and presently neither hospital has interns. Of further great concern has been the Maine Medical Center's inability to fill its internship program for 1968 to 1969 at a time when the quality of this program seems better than ever.

It is becoming apparent that more medical school graduates are being offered internships at medical centers

and affiliated hospitals and are shunning hospitals not so closely affiliated with medical schools.

Medicare and Medicaid payments to the medical school hospitals for physicians and hospital services are financing this increasing concentration of interns and residents at medical school centers.

The only solution to this shortage of interns and residents at our Maine hospitals appears to lie in a Maine Medical School with its own hospital and affiliated teaching hospitals in Portland, Lewiston and Bangor.

The interactions among the medical school faculty, the practicing physicians at these community hospitals and the house officers will provide meaningful postgraduate medical education programs with substantial benefits in medical reseach and improved patient care at these regional centers and surrounding communities. To attempt an educational program without the stimulus of house officers and the teaching exchange between them and practicing physicians inevitably becomes a shallow educational experience.

What are the benefits to the citizens of Maine from a Medical School Center?

They will need to bear the major share of the costs of the center and must be informed of their responsibilities and benefits. The benefits will be substantial.

There will be more physicians available throughout the state; however, there may still be problems in distribution of these physicians.

They will acquire a modern hospital with 500 to 600 beds added to existing hospital facilities. They will be able more conveniently to get highly complicated and sophisticated medical care that now is available only out of state. They will in effect be guaranteeing themselves superior medical care for the forseeable future when there will be ever increasing competition with other states and areas for medical personnel.

What will such a center cost and can Maine afford it?

The estimate of such construction costs now approaches 45 million dollars of which federal funds should furnish 30 million dollars with Maine's share approximately 15 million dollars. However, every year of delay has added 5% to 10% to construction costs and will probably do so in the future so that this inflationary trend in building costs argues forcefully for prompt construction of medical school and hospital facilities.

The annual operating budget can be from 10 million to 30 million dollars with the state's share no more than 3 million dollars.

These sums are great but if a quality medical school of high repute can be established in Maine, it can directly generate enough money in added state revenues to more than pay for its support. The annual payroll derived from patient care, private and federal research grants and subsidies could surpass 25 million dollars.

The indirect benefits of such a center on Maine's economy could be even greater. Its presence would strengthen our reputation for health and education facilities that are so essential to attracting high grade industry. There are also many highly skilled industries that can be expected to settle adjacent to a medical school hospital center. Not only would these industries bring added revenue but also would offer employment opportunities for our University trained students who so frequently migrate out of the state in search of opportunities missing here.

However great these potential economic benefits may be, of paramount importance is Maine's need to supply her own health personnel which is a responsibility she must accept and carry out. In the competition for health care personnel that is apparent now and will increasingly sharpen, our only sure means of protecting our own health interests is through the establishment of a Maine Medical School.

I therefore urge members of the Maine Medical Association to support the continuing attempt to establish a Maine Medical School which will be of great benefit to us, our state and nation.

85 Goff Street, Auburn, Maine 04210

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Editorial

Thoughts On Lung Cancer In Maine

H. Richard Hornberger, M.D.

At the Central Maine Sanatorium and occasional visits at Togus, Belfast, Damariscotta, and in private practice in Waterville, the author encounters about 100 cases of bronchogenic carcinoma a year. Very few of these are operable, only about 20 a year. This excludes those diagnostic procedures such as anterior mediastinal exploration and scalene biopsy. There may be another 10-20 who cannot be considered for surgery because age, emphysema or heart disease rule it out. By anybody's standards, 60-70% of the cases of bronchiogenic are inoperable when first seen, because of obvious metastases.

I can't assess all the factors in this high percentage of inoperability. One factor, which is too large, is the unwillingness of the medical profession to believe its own propaganda. Too many doctors fail to rise to the bait when a patient who smokes too much has a respiratory complaint.

Here is a typical story: Joe Doakes, who is about 56 years old, got a cold early in the spring (the number of bronchogenic carcinomas which start as colds is purely terrifying) and he still hadn't shook it off by the Fourth of July so he went to his doctor who examined him, said his lungs were great, and prescribed penicillin and cough syrup. Joe got better for a month and then in mid-August he took a bad turn and went back to the doctor. This time the doctor ordered an x-ray.

Well, bronchogenic carcinomas produce lots of x-ray changes – or none. A hilar lesion, already inoperable, may escape the most careful examination. A small endobronchial lesion may cause hemoptysis but no x-ray changes – or it may produce a small area which the radiologist calls atelectasis, pneumonitis or infarct. Occasionally a sharp eyed roentgenologist spots an area of hyperaeration, suggesting partial obstruction with trapping of air.

Many radiologists, seeing the above changes, recommend bronchoscopy in their reports. Where I work, this recommendation is usually heeded, but not always.

Let's get back to Joe Doakes. His August x-ray showed some pneumonitis – or was it atelectasis? – in his left lung. The doctor told him he had pneumonia. (There are two kinds of pneumonia: (1) pneumonia and (2) walking pneumonia. If the patient is upright when told of his affliction, it is automatically the walking type.) The doctor urged hospital admission to treat the pneumonia. Well, Joe agrees he does feel some poor, but the hospital will make him poorer, and he's got 200 traps out, and his boy broke his arm and can't haul, so the doctor prescribes a new antibiotic. Three weeks later, in September, Joe coughs up some blood but doesn't get impressed till it happens again five weeks later in October, so he goes to the hospital.

The doctors tells Joe the x-ray still shows the pneumonia. Here the story varies. About half the time, Joe gets bronchoscoped at this point. Joe's other half gets treated for pneumonia for three weeks and then bronchoscoped.

Let's go back two or three months – to the early part of the last July Joe Doakes will ever suffer through. He's had this nagging cold all spring ("started haulin' in April, shoulda' known better"). The doctor either knows, or can easily learn, that Joe burns two or three decks a day. Check his fingers for nicotine stains.

July was the time for the chest x-ray. If negative, and even if symptoms abate, close follow-up of the three month "cold" in the over-smoker is important. If there was doubt about Joe Doakes' x-ray in July, that was the time for a complete work-up.

Well, really, does it make a great big differences? So many of these cases are so hopeless that one is tempted to shrug philosophically, speak of the natural history of the individual tumor, and so forth and so on. In a patient like Joe Doakes, a three to six month doctor delay may make no difference. Joe's disease might have progressed at the same rate, or, he might, with surgery in July, have lucked out with a curative lobectomy and been back hauling traps in September.

I can't say it often enough: if the patient over-smokes (over a pack a day) and complains of anything anywhere, he needs a chest x-ray!!!

A few words about the patient with an abnormal chest x-ray and no nicotine stains on his fingers. Here's a typical conversation:

"Do you smoke?"

"No."

If the doctor stops there, he'll blow it.

Next question: "Did you ever smoke?"

"Some."

"Well, when did you stop?"

"Oh, much as a month ago."

"How much did you smoke before you quit?"

"Pack would last me two-three day."

"What kind did you smoke?"

" " (Mentions a long, filtered, mentholated, charcoaled pacifier.)

"Okay, buddy. Stop snowing me. When did you stop smoking three packs of Fortunate Dromedaries every day?"

"Oh, I ain't smoked like that for three or four year."

"But you did for forty year before that."

"Ayuh, but didn't bother me none till I got that cold, along in '65."

I'll keep saying: I see patients like Joe Doakes too late. In Maine, if all pertinent data were fed into a computer, I suspect that the answer would be: 75% of the people who get attention too late have only themselves to blame. Perhaps 10% would have a better chance if they'd listened to their doctors. And, that leaves an arbitrary 15% in which doctor unawareness, or doctor delay, did them in.

"Doctor delay" deserves a few words. This occurs everywhere but is easiest to see and define in institutional medicine where all major decisions may be made in conferences. The conference may decide that a liver scan in indicated. At its next meeting, a week later, the conference thinks of something else. And so on. If the patient comes to surgery, two, sometimes three, months may have passed. The golden moment may have also passed.

The real work of medicine, particularly in Maine, is not done by people like me. It's done by overworked, harassed general practitioners in scores of small towns and a few cities. It is easy for someone like me, who sees a small volume of patients, to be critical of doctors who aren't alert to symptoms which might require my services.

Still, bronchogenic carcinoma is a common problem. The etiology is known. I'll keep saying: if the patient is over 40, if he admits to more than a pack of cigarettes a day, and he complains of anything, x-ray his chest. If there's even a suspicion of something wrong on the x-ray, a complete work-up is indicated.

When we get right down to it, the essence of the "complete work-up" is a bronchoscopy. Bronchoscopy has diagnostic limitations, but if one sees nothing, if the Pap. smear of the bronchial aspirate is negative, and the x-ray shows only suggestive, as opposed to definite, pathology, carcinoma, while not ruled out, diminishes as a diagnostic possibility.

I think a few lives would be saved every year in this state if there were more doctors who could do a competent bronchoscopy. They wouldn't have to be thoracic surgeons or otolaryngologists – just bronchoscopists. In 1965 I talked to a county medical meeting in Aroostook County and was given to believe that no one in that area was happy enough with a bronchoscope to go into the business. In the same era, I was part of a group which talked to medical types down in Calais. Then (?now) a patient needing a bronchoscopy had to go 100 miles south to Bangor, or to St. John, New Brunswick. So, patients were referred for bronchoscopy only in extreme situations. The reasons – expense and inconvenience – are obvious.

Bronchoscopy is a valuable procedure, which back along was the private bag of the ENT people. Now my gang has taken over. All endoscopy has a certain aura of speciality, mostly because what's written fails to say that either one sees something, or one doesn't. The literature, the text books, get hung up on the nuances of endoscopy, and so do many endoscopists.

Most of us, whether we realize it or not, are pretty good at sigmoidoscopy. As a matter of fact, doing a really good sigmoidoscopy is more difficult than a bronchoscopy. In sigmoidoscopy, our problem is getting the machinery in all the way. In bronchoscopy, the biggest problem is getting it in. Once in, the scope can be advanced easily. Interpreting what one sees, or "feels," with the end of the scope takes some practice, but my point is this: with competent anaesthesia, now available almost everywhere, bronchoscopy, technically, is easy and safe.

I think that one doctor in every town which has a hospital should get handy with a bronchoscope – not just to diagnose carcinomas and refer them to a thoracic surgeon. He should also be able to extract peanuts. A bronchoscope in every hospital would, I believe, decrease the number of patients who are treated, hopefully but unrealistically, and increase the thoracic surgical referrals.

All general practitioners seem to do D&C's, circumcisions, sigmoidoscopies, appendectomies, and many participate in childbirth.

What's so frightening about a straight tube like a trachea, which divides into two big branches, both easily entered and inspected?

I've had the misfortune to miss every meeting of the Maine Thoracic Society for the past three years, including its last meeting, when I became its vice president. (This may not be true but a guy in a garage showed me a newspaper that said so.) My duties are unknown, but I'll create one: if anyone in Maine wants some bronchoscopic exposure, give me two weeks notice, be prepared to come to Waterville on a Tuesday, and I'll find three to five bronchoscopies to do. If possible, bring your anaesthesiologist. I think in two or three sessions I could get anyone started in bronchoscopy.

Discussion: See above.

Summary: None.

2 School Street, Waterville, Maine 04901.

X-Ray Of The Month – No. 3*

Forty-four year old asymptomatic white female came to the hospital for a routine chest x-ray. Multiple rib deformities observed in the left hemithorax.



Polyostotic Fibrous Dysplasia

This is a predominately unilateral disturbance of skeletal development, with extensive substitution of the bone marrow by dense fibrous connective tissue. This causes eccentric atrophy of the cortex (compacta) and secondary broadening and bowing of the long bones and enlargement of the flat bones. The disease begins in childhood and affects females twice as often as males. It most frequently involves the metaphyses and diaphyses of the long bones and spares the epiphyses until closure of the zones of provisional calcification. The disease may go unnoticed but most often manifests itself as an area of pain, deformity, or spontaneous fracture.

A variant of this disease (McCune-Albright's syndrome) occurs almost exclusively in females and shows, in addition to the bony changes, areas of cutaneous pigmentation usually on the same side as the skeletal involvement. There are associated endocrine features which are manifested by unusual sexual precocity.

*From the Department of Radiology, Maine Medical Center, Portland, Maine 04102.

The Journal of the Maine Medical Association

DANIEL F. HANLEY, M.D., Brunswick, Editor

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Across The Desk

Staggers Completes Hill-Burton Bill For Introduction In House

What probably will be the most definitive hospital modernization and construction bill to come before Congress this year will be introduced by Rep. Harley O. Staggers (D-W. Va.). Since Staggers is chairman of the House Interstate and Foreign Commerce Committee, which is responsible for such legislation, there is little doubt the measure will be brought to hearings before Staggers' group.

Several other hospital modernization and construction bills are expected to be introduced, including one by Rep. Paul Rogers (D-Fla.), and an almost inevitable Administration bill which should come eventually from HEW's new high command. But Staggers naturally will be looking most favorably on his own measure.

Aimed at the nation's pressing need for urban hospital modernization, *Staggers will be proposing a three-part program.* He wants to continue the existing Hill-Burton hospital construction and modernization authorization, with some modifications. He will propose a guaranteed loan program with interest subsidies for private, non-profit hospitals. A third part will propose direct 3 percent loans for publicly owned hospitals. The bill, which would authorize a three-year program, differentiates between publicly owned hospitals and privately owned non-profits. Putting Federal guarantees behind loans to municipal hospitals is not likely to affect the interest rate as it would for voluntary hospitals. The interest subsidies to private, non-profits would be half of the first 6 percent and one-third of the interest above 6 percent up to a ceiling to be set later. – *Washington Report on Medicine & Health,* No. 1129, Feb. 17, 1969

Medicare Costs

The Social Security Administration has revised its long-term estimate of Medicare costs sharply upward. Unless changes in financing are made – as they certainly will be – the program could go bankrupt by 1976. The Boards of Trustees of the Social Security Trust Funds, in a report to Congress, say the original cost figures underestimated utilization rates for hospitals and extended care facilities. The present $7,800 earnings base for Social Security taxes will have to be raised to finance the increased Medicare costs. The Part B Supplementary Medical Insurance Trust Fund will have enough reserves to handle the 1969-70 $4 monthly premium. But beyond that, the Boards appear to favor an increase to $4.40 in recognition of higher physician fees and greater utilization. – *Washington Report on Medicine & Health,* No. 1126, Jan. 27, 1969

IRB Announces Rate Increases For Professional Liability

Increases in basic premium rates for professional liability insurance in various states, effective Feb. 26, were announced by the Insurance Rating Board on behalf of its affiliated companies.

The rating organization attributed the rate increases to adverse underwriting results experienced by companies providing the coverages in the affected areas.

Rates for physicians and surgeons liability coverage are increased 22.6 percent in New Jersey. Rates for dentists liability insurance are increased 66.7 percent in Alabama and Maryland, 50 percent in California, 33.3 percent in West Virginia, and 19.4 percent in Massachusetts.

In certain states rates are increased 100 percent for chiropodists and nurses and 50 percent for chiropractors. The states affected are Alaska, Arizona, California, Connecticut, District of Columbia, Georgia, Idaho, Illinois, Indiana, Iowa, Kansas, Louisiana, Maine, Maryland, Michigan, Minnesota, Missouri, Montana, Nebraska,

Continued on Page 80



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Warnings—Watch for the earliest manifestations of thrombotic disorders (thrombophlebitis, cerebrovascular disorders, pulmonary embolism, retinal thrombosis); if present or suspected discontinue the drug immediately.

British studies reported in April 1968[1,2] estimate there is a seven- to tenfold increase in mortality and morbidity due to thromboembolic diseases in women taking oral contraceptives. In these controlled retrospective studies, involving 36 reported deaths and 58 hospitalizations due to "idiopathic" thromboembolism, statistical evaluation indicated that the differences observed between users and non-users were highly significant. The conclusions reached in the studies are summarized in the table below:

Comparison of Mortality and Hospitalization Rates Due to Thromboembolic Disease in Users and Non-Users of Oral Contraceptives in Britain.

Category	Mortality Rates		Hospitalization Rates (Morbidity)
	Age 20-34	Age 35-44	Age 20-44
Users of Oral Contraceptives	1.5/100,000	3.9/100,000	47/100,000
Non-Users	0.2/100,000	0.5/100,000	5/100,000

No comparable studies are yet available in the United States. The British data, especially as they indicate the magnitude of the increased risk to the individual patient, cannot be applied directly to women in other countries in which the incidences of spontaneously occurring thromboembolic disease may differ.

Discontinue medication pending examination if there is sudden partial or complete loss of vision, or sudden onset of proptosis, diplopia or migraine. Withdraw medication if papilledema or retinal vascular lesions are found.

Since the safety of Ovulen in pregnancy has not been demonstrated, it is recommended that pregnancy be ruled out for any patient who has missed two consecutive periods before continuing the contraceptive regimen. If the patient has not adhered to the prescribed schedule the possibility of pregnancy should be considered at the first missed period.

A small fraction of the hormone agents in oral contraceptives has been identified in the milk of mothers receiving these drugs. The long-range effect to the nursing infant cannot be determined at this time.

Precautions—Pretreatment physical examination should include special reference to the breasts and pelvic organs, and a Papanicolaou smear.

Endocrine and possibly liver function tests may be affected by Ovulen. Therefore, it is recommended that such tests if abnormal be repeated after the drug has been withdrawn for two months.

Pre-existing uterine fibromyomas may increase in size under the influence of progestogen-estrogen preparations.

Because these agents may cause some degree of fluid retention, conditions which might be influenced by this factor, such as epilepsy, migraine, asthma, cardiac or renal dysfunction, require careful observation.

In breakthrough bleeding, and all irregular vaginal bleeding, consider nonfunctional causes. Adequate diagnostic measures are indicated in undiagnosed vaginal bleeding.

Carefully observe patients with a history of psychic depression and discontinue the drug if severe depression recurs.

Any possible influence of prolonged Ovulen therapy on pituitary, ovarian, adrenal, hepatic or uterine function awaits further study.

A decrease in glucose tolerance has occurred in a significant percentage of patients on oral contraceptives. The mechanism of this decrease is obscure. For this reason, diabetic patients should be observed carefully while receiving Ovulen.

Because of the effects of estrogens on epiphyseal closure Ovulen should be used judiciously in young patients in whom bone growth is not complete.

The age of the patient constitutes no absolute limiting factor, although Ovulen therapy may mask the onset of the climacteric.

The pathologist should be informed of Ovulen therapy when relevant specimens are submitted.

Adverse Reactions—A statistically significant association has been shown between use of oral contraceptives and the following serious adverse reactions: thrombophlebitis, pulmonary embolism.

Although available evidence is suggestive of an association, such a relationship has been neither confirmed nor refuted for the following serious adverse reactions: cerebrovascular accidents, neuro-ocular lesions, e.g., retinal thrombosis and optic neuritis.

The following adverse reactions are known to occur in patients receiving oral contraceptives: nausea, vomiting, gastrointestinal symptoms (such as abdominal cramps and bloating), breakthrough bleeding, spotting, change in menstrual flow, amenorrhea during and after treatment, edema, chloasma or melasma, breast changes (tenderness, enlargement, secretion), change in weight, changes in cervical erosion and cervical secretions, suppression of lactation when given immediately post partum, cholestatic jaundice, migraine, allergic rash, rise in blood pressure in susceptible individuals, mental depression.

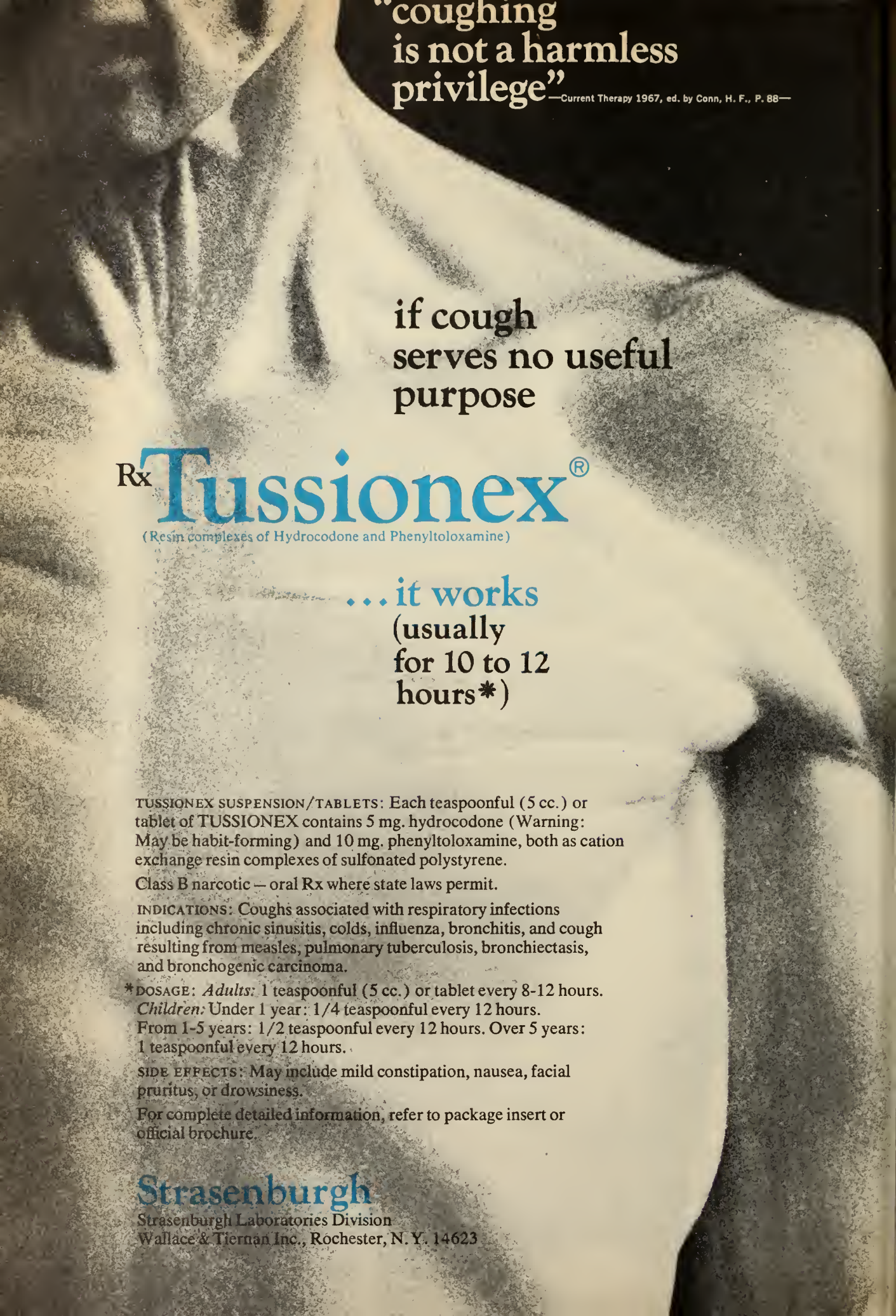
Although the following adverse reactions have been reported in users of oral contraceptives, an association has been neither confirmed nor refuted: anovulation post treatment, premenstrual-like syndrome, changes in libido, changes in appetite, cystitis-like syndrome, headache, nervousness, dizziness, fatigue, backache, hirsutism, loss of scalp hair, erythema multiforme and nodosum, hemorrhagic eruption, itching.

The following laboratory results may be altered by oral contraceptives: hepatic function: increased sulfobromophthalein and other tests; coagulation tests: increase in prothrombin, Factors VII, VIII, IX and X; thyroid function: increase in PBI and butanol extractable protein bound iodine, and decrease in T^3 uptake values; metyrapone test; pregnanediol determination.

References: 1. Inman, W. H. W., and Vessey, M. P.: Brit. Med. J. 2:193-199 (April 27) 1968. 2. Vessey, M. P., and Doll, R.: Brit. Med. J. 2:199-205 (April 27) 1968.

Before prescribing see Detailed Product Information.

SEARLE Where "The Pill" Began
G. D. SEARLE & CO., P. O. Box 5110, Chicago, Illinois 60680



TUSSIONEX SUSPENSION/TABLETS: Each teaspoonful (5 cc.) or tablet of TUSSIONEX contains 5 mg. hydrocodone (Warning: May be habit-forming) and 10 mg. phenyltoloxamine, both as cation exchange resin complexes of sulfonated polystyrene.

Class B narcotic – oral Rx where state laws permit.

INDICATIONS: Coughs associated with respiratory infections including chronic sinusitis, colds, influenza, bronchitis, and cough resulting from measles, pulmonary tuberculosis, bronchiectasis, and bronchogenic carcinoma.

*DOSAGE: *Adults:* 1 teaspoonful (5 cc.) or tablet every 8-12 hours. *Children:* Under 1 year: 1/4 teaspoonful every 12 hours. From 1-5 years: 1/2 teaspoonful every 12 hours. Over 5 years: 1 teaspoonful every 12 hours.

SIDE EFFECTS: May include mild constipation, nausea, facial pruritus, or drowsiness.

For complete detailed information, refer to package insert or official brochure.

Strasenburgh

Strasenburgh Laboratories Division
Wallace & Tiernan Inc., Rochester, N.Y. 14623

DEAN H. FISHER, M.D.
COMMISSIONER

State Of Maine

Department of Health and Welfare

Mental Health Resources Directory

JOHN B. LEET*

Maine is changing and broadening its action for mental health from a state hospital-centered base to a community-centered base utilizing every existing mental health service in Maine.

Initially, Federal planning funds gave impetus to the establishment of such a program. For the past three years, the major effort for implementation of the program has been the joining together of State, public, and private agencies providing mental health services, either by letter of agreements or mergers to offer essential mental health services to the people of Maine.

This directory is a reference to outpatient Mental Health Services by designated mental health areas.

MENTAL HEALTH CENTER AREA I

County served: Most of Aroostook county and small areas of adjacent Piscataquis. *Sponsoring Organization:* Aroostook Mental Health Services, Inc. *Title of Facility or Service:* Aroostook Mental Health Clinic. *Address:* Community General Hospital, Fort Fairfield, Maine 04742. *Telephone:* 472-3141. *Statement of purpose:* To promote mental health throughout Area I. *Admission procedure:* Referrals from any source. Medical evaluation for those not having a family physician. Following referral, a study is made of the social and development history of the referred, to assist the staff in development of a treatment plan. As soon as possible, the individual is notified of his first therapy appointment. *Services available:* Psychiatric consultation and evaluation; social investigation; psychological testing; community consultation; and aftercare followup. *Fee basis:* Based on sliding scale related to ability to pay. *Office hours:* Tuesday 9:00 A.M. to 10:00 P.M.; Wednesday, Thursday, Friday 8:00 A.M. to 5:00 P.M.

Sponsoring Organization: Aroostook Mental Health Services, Inc. *Title of Facility or Service:* Houlton Mental Health Center (satellite to Aroostook Mental Health Services). *Address:* 97 Military Street, Madigan Hospital, Houlton, Maine, 04730. *Telephone:* 532-6387. *Statement of purpose:* To provide mental health services to any resident of southern Aroostook county. *Admission procedure:* Self referral or referral from other person or agency. *Services available:* Clinical psychologists offer (1) Evaluation and treatment of children and adolescents with mental, emotional, school, or deliquency problems, (2) evaluation and treatment of adults with varied emotional and mental problems, (3) marriage counseling and pre-marital counseling, (4) consultation services to various community agencies and institutions. *Fee basis:* Sliding fee scale. *Office hours:* Monday through Friday – 8:30 A.M. to 4:30 P.M.



Maine Mental Health Center Areas

Sponsoring Organization: Aroostook Mental Health Association. *Title of Facility or Service:* Fort Kent Mental Health Center. *Address:* Peoples Benevolent Hospital, Fort Kent, Maine 04743. *Telephone:* 472-3141. *Statement of purpose:* To provide mental health services to residents of St. John Valley. *Admission procedure:* By application to Aroostook Mental Health Clinic. *Services available:* Psychological evaluation and counseling. *Fee basis:* Sliding scale. *Office hours:* See hours of Aroostook Mental Health Clinic.

*Deputy Director, Bureau of Mental Health.

Mental Health Center Area II

Counties served: Piscataquis, Penobscot, Waldo, Washington and Hancock. *Sponsoring organization:* State of Maine. *Title of Facility or Service:* Outpatient Clinic. *Address:* Bangor State Hospital, Bangor, Maine 04401. *Telephone:* 947-7386, Ext. 310. *Statement of purpose:* To provide outpatient psychotherapeutic services of either intensive or supportive nature to persons in Mental Health Areas I and II with more or less severe or deep-seated emotional problems. This clinic provides continuity of service with the inpatient service and offers aftercare. *Admission procedure:* Application by either telephone or letter to the clinic for appointment. *Clientele served:* Anyone over the age of 16 from Mental Health Areas I and II. *Services available:* Psychological evaluation, psychiatric consultation, individual and group psychotherapy. *Fee basis:* No fee schedule at this time. *Office hours:* Monday through Friday – 8:30 A.M. to 5:00 P.M.

Notice

The Eastern Maine Guidance Center and the Family and Child Services of Bangor have merged to form an area mental health center. The name of the newly formed service is "Counseling Center" and the address is Bangor International Airport, 43 Illinois Avenue, Bangor, Maine 04401. Telephone 947-0366.

Sponsoring Organization: State of Maine and Eastern Maine Guidance Association, Inc. *Title of Facility or Service:* Outpatient Mental Health Clinic. *Address:* 23 Ohio Street, Bangor, Maine 04401. *Telephone:* 207 947-7351. *Statement of purpose:* To promote mental health in central and eastern Maine and to operate a diagnostic and treatment center for the care of emotionally disturbed persons. *Admission procedure:* Request and complete an application form. After the application has been received an intake appointment is scheduled. *Services available:* Diagnostic services including psychological testing and psychiatric evaluation: individual, group and family therapy; mental health consultation; mental health education; and drug therapy. *Fee basis:* Graduated, based on income and financial circumstances. *Office hours:* Monday, Tuesday, Thursday, Friday – 8:00 A.M. to 5:00 P.M.; Wednesday – 8:00 A.M. to 9:00 P.M.

Notice

The Family and Child Services of Bangor and the Eastern Maine Guidance Center have merged to form an area mental health center effective October 24th. The name for this newly formed service is "Counseling Center" and the address is Bangor International Airport, 43 Illinois Avenue, Bangor, Maine 04401. Telephone 947-0366.

Sponsoring Organization: Family and Child Services of Bangor, Inc. *Title of Facility or Service:* Family and Child Services of Bangor, Inc. *Address:* 36 First Street, Bangor, Maine 04401. *Telephone:* 942-4841. *Statement of purpose:* Provide casework counseling to individuals and families in the Bangor-Brewer area with adjustment problems; to promote educational activities aimed at strengthening family life; promote social thinking and action that will improve social and economic conditions; to engage in the study of factors contributing to family disorganization. *Admission procedure:* Appointments given upon request. *Services available:* Casework counseling for individuals and families experiencing difficulties in social adjustment and family relationships. Foster care for children who need temporary placement away from home. Adoption service. Homemaker Health-Aide service. *Fee basis:* Graduated fees based on income, size of family and ability to pay. *Office hours:* Monday – 8:30 A.M. to 8:00 P.M. Tuesday, Wednesday, Thursday, Friday – 8:30 A.M. to 5:00 P.M.

Sponsoring Organization: Mount Desert Island Child Guidance Association. *Title of Facility or Service:* Mount Desert Island Child Guidance Association. *Address:* 322 Main Street, Bar Harbor, Maine 04609. *Telephone:* 288-5466. *Statement of purpose:* To contribute to the healthy personality development and to promote the mental health of the children of Mount Desert Island and children from offshore islands enrolled in an Island high school, by providing a guidance service for such children, their families and their schools. *Admission procedure:* Direct application of an individual or member of his family; referral from other agency or individual. *Services available:* Family counseling, emotional and intellectual testing, psychiatric evaluation, and educational services. *Fee basis:* Voluntary. *Office hours:* Monday through Friday – 9:00 A.M. to 5:00 P.M. and on call 24 hours a day.

Title of Facility or Service: Utterback Private Hospital. *Address:* 31 Kenduskeag Avenue, Bangor, Maine 04401. *Telephone:* 945-4555 or 945-4556. *Statement of purpose:* To treat all phases of mental illness. *Admission procedure:* Referred by family physician, local psychiatrists, former patient or self. Signs voluntary admission form or is committed under either standard or emergency procedure. *Services available:* Clinical laboratory, electric shock therapy, electrocardiogram, registered pharmacist, and consultant dietician. *Fee basis:* Room and board plus itemized charges for other services. *Office hours:* 24 hours a day.

Sponsoring Organization: Washington County Association for Mental Health, Inc. *Title of Facility or Service:* Washington County Mental Health Clinic. *Address:* Down East Community Hospital, Machias, Maine 04654. *Telephone:* 255-3356. *Statement of purpose:* To offer mental health facilities to all people in Washington County. *Admission procedure:* By doctors or other professional people or by friends or self referrals – only necessity is to make an appointment. *Services available:* Clinical psychologist available from May 1st to October 30th. *Fee basis:* Fees are based on patient's ability to pay. *Office hours:* Thursday – 9:00 A.M. to 5:00 P.M.; Friday – 9:00 A.M. to 5:00 P.M.

Sponsoring Organization: Department of Mental Health and Corrections. *Title of Facility or Service:* Psychiatric Services to the Department of Health and Welfare. *Address:* Vickery-Hill Building, Chapel Street, Augusta, Maine 04330. *Telephone:* 289-2781.

A traveling clinic which provides mental health services to children and adults who are clients of the Department of Health and Welfare as well as consultation services to professional personnel. *Serves on a routine basis clients in Bangor-Brewer weekly on each Wednesday; Ellsworth, 2nd Wednesday of February, May, August, and November; and Machias, 2nd Wednesday and Thursday of March, June, September and December.*

Mental Health Center Area III

Counties served: Somerset, Kennebec, and Knox. *Sponsoring Organization:* Augusta State Hospital. *Title of Facility or Service:* Outpatient Clinic – ASH. *Address:* Hospital Street, Box 724, Augusta, Maine, 04330. *Telephone:* 622-6281. *Statement of purpose:* Continued outpatient treatment for discharged ASH patients who require such treatment in order to remain in the community, preferably at an optimal level of functioning, and who cannot secure such treatment in the community, either for financial reasons or because of lack of suitable facilities. *Admission procedure:* Contact outpatient clinic at Augusta State Hospital. *Services available:* All basic psychiatric therapies, including pharmacal, and (1) individual, family and group psychotherapy; (2) counseling with relatives and employers; (3) preliminary psychiatric examinations for determination of criminal responsibility and (4) consultation to social, health and welfare agencies, schools, private physicians and other persons or institutions whose activities or functions relate to the psychological and social adjustment of ex-patients. *Fee basis:* None at present time but are being considered. *Office hours:* Monday through Friday, 8:00 A.M. to 4:30 P.M.

Sponsoring Organization: Augusta-Gardiner Community Council. *Title of Facility or Service:* Friendship Center. *Address:* St. Mark's Parish Home, State Street, Augusta, Maine, 04330. *Telephone:* 623-8588. *Statement of purpose:* To provide an opportunity for resocialization and companionship for in and outpatients at Augusta State Hospital and the U.S. Veterans Administration Center, Togus and clientele of the Revocational Rehabilitation Service within commuting distance of the Augusta area. *Services available:* Entertainment consisting of beano, dancing, educational movies, card games, art work, refreshments and dinner once a month, plus group and individual discussions which lend support and guidance to the clientele. Tuesday and Saturday nights. *Fee basis:* Twenty-five cents per month membership for those who can afford to pay.

Sponsoring Organization: Kennebec Mental Health Association. *Title of Facility or Service:* Kennebec Mental Health Clinic. *Address:* Box 624, Waterville, Maine, 04901. *Telephone:* 873-0621, Ext. 375. *Statement of purpose:* To promote a comprehensive community mental health program in Kennebec and Somerset counties, to establish and operate diagnostic and treatment centers for the care of persons who are mentally or emotionally ill or disturbed; to aid in research for the prevention and care of mental illness. *Admission procedure:* Application should be referred by a professional person. Applicant is then seen for a social intake session by a social worker and later seen for a psychiatric or psychological examination. If amenable to treatment, patient is then seen in individual, group, activity, expressive, or chemotherapy. *Clientele served:* Children, adolescents, adults undergoing acute situational disturbances. *Services available:* Group and individual psychotherapy; activity and interpretive therapy for adolescents; expressive and activity therapy for children. In selected cases – drug therapy. *Fee basis:* Sliding scale based on person's ability to pay. *Office hours:* Monday through Friday, 8:00 A.M. to 5:00 P.M.

Sponsoring Organization: Kennebec Mental Health Association. *Title of Facility or Service:* Skowhegan Mental Health Clinic (satellite to Kennebec Mental Health Clinic). *Address:* Fairview Hospital, Skowhegan, Maine, 04976. *Telephone:* Kennebec Mental Health Clinic, Waterville 873-0621, Ext. 375 (all appointments should be made through the Kennebec Mental Health Clinic's Waterville office at this time). *Statement of purpose:* etc., same as stated above for Kennebec Mental Health Clinic.

Sponsoring Organization: Kennebec Mental Health Association. *Title of Facility or Service:* Augusta Mental Health Clinic (satellite to Kennebec Mental Health Clinic). *Address:* Augusta General Hospital, East Chestnut Street, Augusta, Maine, 04330. *Telephone:* 622-7100. *Statement of purpose:* etc., same as stated for Kennebec Mental Health Clinic.

Sponsoring Organization: Mid-Coast Mental Health Association, Inc. *Title of Facility or Service:* Mid-Coast Mental Health Clinic. *Address:* Medical Arts Building, 22 White Street, Rockland, Maine, 04841. *Telephone:* 596-6676. *Statement of purpose:* To provide mental health consultation, evaluation and treatment to meet the mental health needs of Knox, parts of Waldo, and Lincoln counties. *Admission procedure:* Applications for services can be made through any physician, clergyman, attorney, teacher, nurse, or social worker in the community or self referral. *Services available:* Psychological testing, consultation, evaluation, and treatment. *Fee basis:* All charges are based on the individual's ability to pay. *Office hours:* Monday through Thursday – 9:00 A.M. to 5:00 P.M.

Sponsoring Organization: U.S. Government. *Title of Facility or Service:* Veterans Administration Hospital. *Address:* Togus, Maine, 04330. *Telephone:* 623-8411. *Statement of purpose:* Care and treatment of veterans. *Admission procedure:* Voluntary plus State laws. *Services available:* Psychiatric and general medical services. *Geo-*

Continued on Page 80

Formal Recommendations of The National Forum on Office Management of Smoking Problems*

It is well established that cigarette smoking is injurious to health. Extensive studies have shown that smokers of cigarettes have an increased risk of disability, illness and death from a number of diseases including cancer of the lung, larynx, lip and esophagus, chronic bronchitis and emphysema, coronary artery disease and peptic ulcer. Elimination of cigarette smoking is, in fact, the single most important health measure available today for the prevention of disease and premature death in the United States. The National Forum on Office Management of Cigarette Smoking Problems therefore strongly recommends that physicians accept the obligation to advise all their patients against the use of tobacco, especially in the form of cigarette smoking. This responsibility includes measures to discourage young people from starting to smoke cigarettes.

It is all too frequently thought by the laity that all tissue changes related to smoking occur late in life. In view of the fact that many tissue changes occur shortly after the initiation of the smoking habit, long before manifestations of symptomatic disease, and may be reversed or arrested by discontinuance of smoking, physicians must counsel all patients, particularly teen-agers and young adults, of the necessity for discontinuance. Since recent surveys indicate that people look to physicians for advice about smoking, the physician's responsibility in this area requires particular emphasis.

General Recommendations

Physicians in their offices should do at least the following:

1. They should *inquire* about the smoking habits of all their patients.
2. They should *inform* each patient about the risks involved in continued smoking, and the benefits to be derived from stopping.
3. They should *advise* strongly against smoking.

This minimum program can be carried out with little expenditure of additional time over the usual office routine. However, to be maximally effective, physicians must do more; they must actively assist smokers in their efforts to stop.

Smokers vary in the amount of assistance they require. However, almost all smokers probably benefit from receiving specific instructions on *how* to stop, and continued supervision by their physician of their progress in discontinuation. For more specific suggestions, the following section by Doctors Stross, Fredrickson and Horn should be consulted. The physician's decision on the amount of support to provide will have to be individualized according to the patient's smoking habits and level of exposure.

Patients may inquire about medications to facilitate cessation. There is no single medication so effective as the personal influence and supervision of the physician. However, medications such as tranquilizers or lobeline preparations may, on occasion, be tried in dealing with the discomfort experienced by some smokers during cessation.

Physicians should be sensitive to times in the patient's life, such as illness or other crises, when they may be particularly likely to resume smoking or particularly receptive to suggestions to stop.

The office environment should be conducive to cessation. A general prohibition against smoking in the office should include all of the physician's office assistants, as well as patients and the doctor himself. Signs and literature enforcing the prohibition emphasize to the patient the physician's concern about smoking.

Physicians should be acquainted with, and make use of, the resources in their community for assisting cigarette smokers who want to stop. Among these resources are printed materials and displays available from official and voluntary agencies, and cessation clinics designed to help smokers who feel the need for such assistance. It was the consensus of the Forum that the agencies competent in these areas be urged to expand their present help to physicians.

*Excerpted from *Diseases of the Chest*, Vol. 54, No. 3, September 1968.

Maine Heart Association Notes

20 Winter Street, Augusta, Maine

Oral Contraceptives, Pregnancy, And The Veins

Oral contraceptives must be counted as one of the important new discoveries of this decade. . . . Among the disadvantages of the use of these agents, long-term effect on the peripheral veins is one of the most controversial. . . .

The initial source of concern for the possibility that oral contraceptives and venous thrombosis were causally related came from case reports of association between the two events. Studies . . . were not definitive until the most recent investigations conducted by the British Medical Research Council. These data show that the risk of thrombophlebitis is increased for women receiving these contraceptive drugs. . . .

An independent approach to this problem was that of attempting to determine if the physiological effects of these agents might predispose to the development of phlebitis. Though the cause of the thrombophlebitis that develops spontaneously is poorly understood, two factors are . . . of major importance in its genesis. The first, stasis or reduced velocity of the flow of blood within the affected veins promotes thrombosis. . . . The second, increased coagulability of the blood renders the patient more prone to thrombophlebitis. . . .

Regarding stasis, one well-controlled study has demonstrated that the oral contraceptive drugs cause the veins to dilate abnormally. Two studies have shown that similar effects can be observed during human pregnancy. . . . The studies during pregnancy are pertinent since that hormonal situation is similar to the one created by oral contraceptive agents. Thus, these changes in distensibility may be due, at least in part, to structural changes of the vessel wall. . . . This venodilation has the effect of a significant decrease in the velocity of blood flow within the veins and, because of this stasis, would increase the likelihood of thrombosis.

A less hazardous, yet undesirable, effect of chronic dilatation of the veins is the potential for producing varicose veins. . . . An inherent increased distensibility may have preceded the onset of clinical varicose veins. This information raises the question of whether the induction of chronic mild dilatation of the veins by drugs would likewise lead to development of varicose veins.

. . . Circumstances undoubtedly do occur in which the use of oral contraceptive agents do have an importance which clearly outweighs the small risk of side effects here described. However, many women are receiving these agents who should not be subjected to even the slightest added risk of thromboembolism. . . . There are also many women who would not wish to enhance their chances of developing varicose veins later in life. It is therefore imperative that the dimension of these risks be defined, so that medical indications may be defined in turn. On the basis of presently available information, . . . the physician should have more specific reason than the patient's convenience for prescribing oral contraceptive agents.

Submitted by Jacob B. Dana, M.D., President, Maine Heart Association.

Reference: Wood, J. E., Editorial, Circulation, Vol. XXXVIII, pages 627-628, 1968.

An Answer To Those Who Criticize Rising Hospital Charges

By Albert Couchman
President of the Couchman Advertising Agency, Dallas, Texas

If you listened only to the critics of rising hospital charges, you might never know that the greatest blessings of the 20th century are the amazing advances in hospital-medical care.

In 1925, one out of every four major-surgery patients died. Today it has dropped to one in a hundred.

In 1937, only one out of every seven persons suffering from cancer could be saved. Today it is one out of three.

In 1900, a newborn baby could expect, on the average, to live to age 48. By 1940, this had jumped to 63, and today it is 70.3 years.

Since 1945, deaths from all diseases are down 59%. By category of disease, the figures tell the story: pneumonia, 33% drop; whooping cough, 85% drop; scarlet fever, 89% drop; diphtheria, 92% drop.

Continuing advances in drugs are pushing one disease after another off the health care stage. Doctors have devised new procedures and techniques not even dreamed about two generations ago. And inventive minds have produced new equipment to make these procedures possible.

The startling fact is that 90% of the drugs used in hospitals today were not known even 15 years ago, and 75% of them were not known only five years ago. And it is now commonplace to open up the human heart to repair some birth defect, to replace a damaged valve with a mechanical one, to implant an electronic device to control the beat, even to replace the entire heart with one from another person who has been killed in an accident.

Where once the hospital was a place to go to die, it is now a place to go to live, to live longer.

Just 20 years ago, one third of America's babies were born at home; today better than 95% are born in the hospital, with a healthier start in life. In fact, one out of every five people in the U.S. will be a patient in a hospital this year.

Yet there is much criticism of costs.

What value do you put on a respirator which keeps a baby breathing until he decides to breathe for himself? The manufacturer's price is $4,000. Should the hospital own this equipment? If so, it goes on the hospital's books as an asset, and must be amortized, just like a drill press or a 10-ton truck. The hospital must charge someone for its use until the purchase price is paid back.

What value do you put on a fluoroscopic-radiographic room and its equipment? Ten years ago, this department could be fully equipped at a cost of $10,000; five years ago it was still only $29,000; today minimum cost would be $100,000. One hospital, with a cobalt therapy machine purchased in 1960, finds it must already be replaced, and the replacement cost is $75,000-plus for that machine alone.

What value do you put on the automated laboratory called an Autoanalyzer? This amazing unit provides a chemistry profile of 12 laboratory tests all at once, using only a small amount of blood. These 12 simultaneous chemical determinations help the physician better and faster diagnose conditions of the patient's liver, kidneys and heart. An "extra" from this $60,000 item is that the multiple tests reveal illnesses not suspected by the physician.

Yet how blithely the critics charge into congressional hearings, into public meetings, into print, and before the microphone and camera, denouncing the very system which one day may save their own lives.

Can it be they would like us to turn back the clock?

Would they prefer to see 25 out of every hundred patients die following major surgery?

There's a price tag on every revolution. And the hospital-medical care revolution is no exception.

ANNUAL MEETING DATES FOR YOUR 1969 CALENDAR

Maine Medical Association, June 15-17, 1969 at The Samoset, Rockland, Maine

American Medical Association, July 13-17, 1969, New York, New York

AMERICAN CANCER SOCIETY - MAINE DIVISION, INC.

Brunswick, Maine

PHILADELPHIA, PA. — The legendary "luck of the Irish" doesn't hold when it comes to skin cancer, recent studies disclosed by the American Cancer Society indicate.

The investigations show that the native Irish descendant of the early Celts has a higher than normal susceptibility to the development of skin cancer as a result of exposure to the sun, probably due to a genetic predisposition.

Fortunately for those who are predisposed to skin cancer — either through excessive exposure to ultraviolet radiation, or by genetic make-up, or a combination of the two — this type of cancer is the most quickly detectable, easiest and most effectively treated, and has the highest cure rate of all types of the disease. In addition, skin cancer has the highest incidence of all cancers, among all people.

A parallel study by the same researchers involved in the Irish study demonstrates that the "native" American is far less susceptible to skin cancer from excessive sunlight exposure than his Celtic cousin. A "native" American is defined in the study as one whose roots in this country go back at least as far as his grandparents having been born here.

According to Dr. Frederick Urbach, professor and chairman of the Department of Dermatology at Temple University Health Sciences Center in Philadelphia, the findings of the Irish study confirm "beyond any reasonable doubt" the long held belief that excessive exposure to the sun brings on skin cancer. The two studies also vividly point out that sunlight exposure affects people of different ethnic backgrounds to varying degrees.

The Irish study also demonstrates that in the case of the Irish, genetic make-up and excessive sunlight combine to make the man of Galway more susceptible to skin cancer than most others.

Identification of this apparent genetic predisposition, Dr. Urbach adds, gives the Irishman a decided advantage over others in just knowing about it. With this knowledge, as with the knowledge that lung cancer can be averted by avoiding smoking cigarettes, the Irishman of Galway Bay can take steps to avoid the excessive exposure he now knows will give him skin cancer.

The Irish study was a joint effort by the medical schools of the University of Galway, Ireland, and Temple University. To obtain the information, Dr. Sean F. O'Brien, professor of Surgery at the Galway Medical School directed a project in which one and one half per cent of the population of that county were interviewed in depth in an effort to determine the relationship of a variety of physical, physiologic, medical and family factors thought to be possible related to keratosis (precancerous skin lesions) and cancer prevalence.

Dr. Urbach's department at Temple performed the analysis and interpretation of the data.

The study was stimulated by the finding that by age 75, 10.5% of the adults in Galway had skin cancer due to ultraviolet radiation — in a country known for being cloudy, cool and damp most of the year. Ireland is not known as a haven for sun worshippers. In contrast, in the hot sunny, dry areas of El Paso, Texas — the prevalence of skin cancer among people over 75 is only 3.5%.

The average Galway-Irishman has blue eyes, dark hair, and a fair complexion. He tans slowly to a light, or medium color. Only 40% of his group sunburns easily. In fact, in contrast to many Americans, this individual is unlikely to have ever had a severe, uncomfortable sunburn. Yet, the older he gets, the more likely he is to get skin cancer.

Why, then, if he has less exposure to the sun, does he (1) not burn easily; (2) has he not had a really painful sunburn experience; (3) has such a high rate of skin cancer?

Dr. Urbach believes the difference is in the genes — that "people of Celtic stock, Irish or Scottish, are more susceptible to skin cancer than other races," and that genetic background, "particularly a Celtic family history are associated with the ease of skin tumor production in man."

The mystery of why exposure to sunlight is so great in foggy, cloudy Ireland is explained by the fact that sunlight is only one part of the exposure — the warming part. Exposure to ultraviolet radiation is not much less through clouds as in bright sunlight when one is outside. Many Irishmen are farmers, or work in other occupations outdoors.

Another phase of the Irish study indicated that in spite of his higher susceptibility, the Galway man is better off where he is than if he moved to a climate like El Paso.

A control survey, made among residents of Caboolture, Australia — one of the hottest, highest sunlight exposure places on earth — showed that a whopping 26% of men there get skin cancer by age 75. Most of the Caboolture residents are immigrants to Australia from the British Isles, with a large number from Ireland.

In his parallel study in Philadelphia, Dr. Urbach interviewed and examined 426 persons who came to the clinic at the Skin and Cancer Hospital of Philadelphia, a unit of the Temple Health Sciences Center. Based on the statistics derived from the Irish study, he determined that among "native" Americans — at least third-generation Americans whose grandparents had been born in this country — 289 skin cancers should have been found. Only 180 turned up. Among foreign born Irish, he expected to find 24 . . . he found 70. Among Italians, he expected 57; found 33. There was no significant difference between expectation and findings among Germans, English or French.

"The U.S. native is significantly less sensitive than one might think, for the production of skin cancer," Dr. Urbach concluded.

His study, thus far has "tacked down" the fact that in the Irishman, the genetic relationship is the cause of his propensity for getting sunburn. He burns easily, freckles easily, and does not tan very well.

The fact that a higher percentage of Irishmen (Celts) in Philadelphia get skin cancer than in Galway has led Dr. Urbach to his present study, to determine if the Philadelphia Irish is actually any different from the Galway Irish in skin cancer susceptibility. He is comparing 70 Irishmen in Philadelphia to 70 skin cancer patients and 70 controls. Then he will compare those figures with similar data for native-born Americans, Italians, etc.

"We hope to determine how Irish is the Philadelphia Irishman," he added. With the Galway statistics, "We have a group of practically pure Celts to compare with. The Galway Irish are probably the most sensitive group of normal people anywhere to sunlight damage."

He attributes the higher incidence of skin cancer among Philadelphia Irish to the difference in latitude — Galway is 54 degrees north; Philadelphia is 40 degrees north — with the correspondingly greater exposure to sunlight.

American Cancer Society News Service Release.

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County Society Notes

KENNEBEC

The November 1968 meeting of the Kennebec County Medical Association was held as a joint meeting with the Kennebec Bar Association at the Hotel Jefferson in Waterville, Maine. The meeting was opened by William P. Niehoff, President, Kennebec Bar Association and by Richard H. Dennis, M.D., President, Kennebec County Medical Association. An announcement was made by the Secretary of the Medical Association in support of operation "Partner's Ship" whereby Maine doctors are asked to search their hospitals, homes and their hearts for material contributions to hospitals in our sister state of Rio Grande do Norte in the impoverished northeastern section of Brazil. Materials donated will be loaded aboard the Maine Maritime ship, State of Maine, by December 15, 1968. The Association members present were informed of the proper address at which to send the donated materials.

The program of the evening was presented by the Maine Trial Lawyers Association and featured addresses by Attorney Herbert Bennett of Portland and Attorney Charles Smith of Saco. The participating speakers urged lawyers to adequately review civil cases with testifying physicians prior to actual court procedures. Attorneys should explain to physicians what is expected of them and in addition the attorney should know the background, experience and training of the doctor. It was pointed out that a jury must weigh qualifications of both the plaintiff's physician and the defense individual's physician. Attorneys were urged to take the time in court to question the physician about the case history he obtained on the initial and subsequent examinations and also in reference to initial and final diagnoses and what facts diagnoses were based on and whether diagnoses were tentative or conclusive. The matters of possibility and probability in the areas of diagnosis and prognosis were also discussed. Physicians were urged to explain medical terms to be used in court. It was stated that all of this could be summed up under the statement "Prepare the medical witness." Both physicians and lawyers should understand what they mean by various terms like "disease," "good result," etc. Physicians were urged to submit thorough reports since such documents save time and confusion. They were urged to specify details pertinent to the type of injury involved in civil cases and to explain why certain modes of therapy were chosen. Physicians were urged to remember that they will be used by laymen whether they be used in court, by insurance companies, etc. Physicians were urged to specify whether or not in their opinion an injury had resulted in permanent disability and to estimate if possible the percentage of functional impairment and what effect such injury might have on a patient's work ability. Attorneys were advised to use medical texts of standard character and medical dictionaries in familiarizing themselves with the background of medico-legal cases. The importance of signed releases permitting release of medical information was stressed. In the question and answer period, the panel emphasized the importance of a free exchange of information between the two professions and the Bar Association; especially stressed the attorneys are often in a difficult position in terms of telling physicians at exactly what time they should appear in a given court to testify because of the number of large civil case loads being handled. Physicians were assured that attorneys will do their best to be as considerate of the physician's time as possible under the difficult circumstances that often exist.

Also present at the head table were District Court Judge Ralph Ross and Superior Court Justice David Roberts.

The meeting was attended by approximately ninety physicians and attorneys and the excellent participation assures its continued sponsorship annually by the two Societies.

Prior to adjournment, Dr. Dennis appointed a nominating committee consisting of Drs. Kenneth W. Sewall, Frank B.

Bull and Brinton T. Darlington, with Dr. Sewall to serve as chairman.

The annual meeting of the Kennebec County Medical Association was held at the Augusta State Hospital in Augusta, Maine on December 12, 1968. Members of the Association were dinner guests of the Medical Staff at the hospital and were welcomed by the Director, John C. Patterson, M.D. An excellent dinner was served in the hospital dining room, following which the business meeting was convened by the President, Richard H. Dennis, M.D.

Dr. Dennis introduced Asa C. Adams, M.D. of Orono, President of the Maine Medical Association, who was a special guest.

The following officers were elected for 1969:

President, Joseph R. Crawford, M.D., Augusta
Vice-President, George I. Gould, M.D., Richmond
Secretary-Treasurer, Francis A. Spellman, M.D., Togus
Councilors, Drs. Vaughan R. Sturtevant, Paul A. Jones, Jr. and Richard H. Dennis, all of Waterville, and John C. Patterson and Francis J. O'Connor, both of Augusta

Election of delegates was deferred until the January 1969 meeting.

The Scientific Program was given by Chiu-an Wong, M.D. and Lawrence D. Egbert, M.D. of the Departments of Surgery and Anesthesia respectively of the Massachusetts General Hospital. Their topic was Emotional Responses in Surgery.

Dr. Egbert described emotional responses occurring in individuals facing surgery and anesthesia and how these factors may alter an individual's concept of himself. He also presented statistical studies of responses to the stress of illness and surgery and reviewed methods of improving relationship between patient and physician, which permit a patient to go through anesthesia and surgery more smoothly.

Dr. Wong illustrated how illnesses and responses to the challenge of major surgical procedures may be influenced by underlying emotional problems. He urged the members attending to provide ample opportunity to patients for discussion of such problems and reminded them that patients will confide in them only if they find the physician thoughtful, considerate and willing to listen.

FRANCIS A. SPELLMAN, M.D., *Secretary*

PENOBSCOT

The Penobscot County Medical Society meeting was held at the Bangor House in Bangor, Maine on December 19, 1968. The meeting was called to order by the President, Leonard G. Miragliuolo, M.D.

George W. Wood, III, M.D. reported on the meeting in Miami, commenting that a new attitude toward Osteopathic Service developing within the A.M.A., so that qualified Osteopaths will in the future, be included in conventional training programs and practice situations. Dr. Wood and Dr. Asa C. Adams also had some remarks to make about the future position of the A.M.A., noting that there have been some major changes which signal a more responsive attitude.

Lewis E. Phillips, M.D. of Bangor was elected to membership in the Society.

Thornton W. Merriam, Jr., M.D. commented on Hong Kong flu and the telephone abuse which is resulting from public confusion. Dr. Miragliuolo appointed a committee consisting of Drs. Merriam, Robert O. Kellogg and John S. Houlihan, to consider and handle this problem.

Dr. Merriam also commented on the drug abuse kit which is now available from the A.M.A., and which provides information for the personal enlightment of physicians and which may be used for lectures to the lay public.

The nominating committee which included Drs. Richard T. Munce, Jay K. Osler and William A. Purinton presented the following list of officers for 1969:

President, Lloyd Brown, M.D., Bangor
President-Elect, Edward L. Curran, M.D., Bangor
Secretary, William M. Shubert, M.D., Bangor
Treasurer, Thornton W. Merriam, Jr., M.D., Bangor
Delegates to the M.M.A. House of Delegates, Drs. Jay K. Osler, Leonard G. Miragliuolo, George O. Chase, Charles D. McEvoy, Jr. and William M. Shubert, all of Bangor, Russell M. Lane, Orono. Alternates, Drs. Thornton W. Merriam, Jr., Lloyd Brown and Stanley J. Evans, all of Bangor, Irvin E. Hamlin, E. Millinocket and Wilfred I. Butterfield, Lincoln
Executive Council, Drs. Lloyd Brown, Edward L. Curran, William M. Shubert and Thornton W. Merriam, Jr.
Councilors, Drs. John S. Houlihan, Bangor (3 yrs.), Charles D. McEvoy, Jr. (2 yrs.), Wilfred I. Butterfield (1 yr.) and Leonard G. Miragliuolo

Mr. Jerry Merrill, Claims Manager of Blue Shield, then gave the feature presentation which was a discussion of usual, customary, and reasonable fees – a new program being developed by Blue Shield. He stated that this type of arrangement has been used by CHAMPUS since 1967 and that presently national accounts such as General Motors and federal employees have adopted this type of program. He explained that Blue Shield will attempt to get a list of usual and customary fees from individual physicians but that these will then be evaluated on an area basis and through local representation to Blue Shield; the individual physician will be able to exercise his influence. Mean fees will be established for each physician and stored in a computer and as the physician changes his fee schedule, this will be included in the stored information and periodically the payment schedule will be re-evaluated. In the discussion which interrupted his lecture, several questions were asked. These essentially sought more information from Blue Shield so that individual physicians or group of physicians could consider their own fee schedules and place these in better balance with other areas of New England.

Dr. Miragliuolo thanked the Society for his enjoyable year as its President and the new President, Lloyd Brown, M.D., was installed.

WILLIAM M. SHUBERT, M.D., *Secretary*

CUMBERLAND

A meeting of the Cumberland County Medical Society was held at the Steer House in South Portland, Maine on December 19, 1968 with approximately eighty-five members and guests attending. Following a social hour and dinner, the meeting was called to order by the President, Eugene P. McManamy, M.D.

Benjamin Zolov, M.D. read a resolution on the death of Francis A. Fagone, M.D. and the membership voted to spread a copy of this on the records and to send a copy to the family.

Dr. McManamy presented an amendment to the Bylaws of the Cumberland County Medical Society as proposed by Henry B. Finks, M.D.:

> "Be it resolved that no money shall be voted for any philanthropy or other cause, in an amount in excess of one hundred dollars, without first notifying the entire membership at least one month in advance, prior to the voting of such funds by the Society."

Some discussion of the matter followed, but no final action was taken because the membership had not received written copies of the amendment ten days or more prior to this meeting. Final action on the amendment was, therefore, deferred to a subsequent meeting.

Laban W. Leiter, M.D. presented another proposed change in the Bylaws of the Society:

> "It is recommended that the Bylaws of the Cumberland County Medical Society be changed to provide for an Executive Board, said Board to include the duly elected officers (President, Vice-President, and Secretary-Treasurer),

and an elected representative from each of the major specialty groups (Surgery, Internal Medicine, Pediatrics, and General Practice), and two appointed members-at-large (possibly to include the Councilor of the First District of M.M.A. if he is a member of the Cumberland County Society); and that quorum of this Executive Committee be constituted of five members; said Executive Committee to meet at least two weeks prior to any scheduled meeting of the County Society and act on routine matters with such action subject to approval of the membership at subsequent meeting, and to prepare an agenda of the more important business matters to come before the Society with the agenda to be distributed to the individual members in advance of the actual meeting. It is to be made clear that new business not on the agenda can be introduced by a member and routinely would be referred to the Executive Committee for subsequent action and included on subsequent agenda; however, in event of urgency or desire to introduce new business without waiting for such consideration, a two-third vote of the members present could bring new business before the group for immediate action."

Considerable discussion of the matter followed with suggestions that some provision for continuity of the members of the Executive Board be provided in the amendment and questions as to the need for and exact duties of the proposed enlarged Executive Board. Because the written copy of the proposal which had been distributed to the membership prior to the meeting was not in the same form as the proposal actually introduced by Dr. Leiter, and because many of the members of the Society are not familiar with the Constitution and Bylaws of the Cumberland County Medical Society, a motion was made, seconded, and passed that a copy of the Constitution and Bylaws accompanied by corrected copies of these two amendments be sent to all members of the Society for their consideration prior to any final action on the proposed changes.

The application of Chester W. White, Jr., M.D. was read and he was voted into membership as a transfer from the Ohio State Medical Society.

The nominating committee consisting of Drs. Charles R. Geer, chairman, Alvin A. Morrison and Charles W. Capron presented the following slate of officers for 1969 which was approved:

President, George F. Sager, M.D., Portland
Vice-President, Lawrence Crane, M.D., Portland
Secretary-Treasurer, Douglas R. Hill, M.D., South Portland
Delegates to the M.M.A. House of Delegates, (2 yrs.) Drs. David K. Lovely, Stephen E. Monaghan and John F. Gibbons, all of Portland, Ralphael F. Turgeon, Westbrook, Kirk K. Barnes, Brunswick and Edmund W. Hardy, Falmouth; (1 yr.) Drs. Louis N. Taxiarchis, Eugene P. McManamy and George F. Sager, all of Portland, and Sidney R. Branson, South Windham. Alternates, (2 yrs.) Drs. Howard P. Sawyer, Jr., Charles E. Skillin and Alfred E. Swett, all of Portland, Robert H. Pawle, Falmouth, Harold N. Burnham, Gorham and Harris Hinckley, South Portland; (1 yr.) Drs. John R. Davy and Robinson L. Bidwell, both of Portland, Houghton M. White, Brunswick and Paul V. Davis, Bridgton.
Public Relations Committee, Drs. John A. Godsoe, Chairman and James H. Bonney, both of Portland and Edmund W. Hardy, Falmouth.

George F. Sager, M.D. introduced John R. Davy, M.D. who spoke on the problems confronting the Health Task Force of the Model Cities Program of the City of Portland and of the goals of the Maine Regional Medical Program. The presentation stimulated thought as to the future roles of hospital staffs, medical societies, and other health groups in the planning and delivery of medical care.

STANLEY B. SYLVESTER, M.D., *Secretary*

The Cumberland County Medical Society meeting was held at Valle's Steak House in Portland, Maine on January 16, 1969 with approximately two hundred and two members and guests in attendance.

Following a social hour and dinner, the meeting was called to order by Vice-President, Lawrence Crane, M.D. in the absence of the President, George F. Sager, M.D. The Head Table was introduced and included Dr. and Mrs. McManamy, Dr. and Mrs. Glassmire, Dr. and Mrs. Hill, Dr. and Mrs. Sylvester, Dr. and Mrs. Johnson and Vice-President, Dr. and Mrs. Crane. Mrs. Johnson spoke for the visiting Auxiliary and the suggestion from Dr. Crane that a future Auxiliary meeting include a dinner-dance seemed to be a popular motion. A show of hands from the wives showed full support. This suggestion will be passed on to the Program Chairman.

Dr. Glassmire, Councilor for the First District, spoke briefly calling attention of the Society to a bill which the Druggists are seeking support of to control over-the-counter drugs. He also noted that the Council is bringing under consideration the recent marked increase in professional fees.

It was announced that Philip G. Whitney, M.D. has accepted the position as Program Chairman.

Dr. Crane introduced the guest speaker, Mr. Edward Cass of the Federal Bureau of Narcotics, Boston, Massachusetts. Mr. Cass spoke on the drug problem with particular reference to the use of marihuana. He felt that a great deal needs to be learned about the drug, but that from recent evidence it seems the effects of the drug are certainly dose related and this is something that could be pointed out to young people. He felt that there was a need for more education and a need for more research, but he stressed communication as being necessary in trying to help people involved with drugs. He further stressed that it must be sincere communication and knowledgeable communication by the people seeking to give the help. Following his talk, Mr. Cass answered questions from the membership and then spent several minutes following the formal question period answering personal questions.

DOUGLAS R. HILL, M.D., *Secretary*

ANDROSCOGGIN

The annual meeting of the Board of Corporators of the Androscoggin County Medical Association met at St. Mary's General Hospital in Lewiston, Maine on December 19, 1968 with twenty-two members present. The meeting was called to order by the President, Joseph J. Rando, M.D.

John L. Archambault, M.D. of Auburn was elected to membership.

Otis B. Tibbetts, M.D. presented the report of the investment committee and it was moved and voted that the officers decide how much money is to be invested and report to the membership at the next meeting.

The nominating committee consisting of Drs. Harvey J. Proulx, Robert D. Wakefield and John A. James presented the following slate of officers for 1969 which was approved:

President, John W. Carrier, M.D., Lewiston
Vice-President, Lionel R. Tardif, M.D., Lewiston
Secretary-Treasurer, Donald L. Anderson, M.D., Lewiston
Delegates to the M.M.A. House of Delegates, Drs. John W. Carrier (1 yr.) and Joseph J. Rando (3 yrs.), both of Lewiston. Alternates, Drs. Lionel R. Tardif (1 yr.) and Daniel R. Shields (3 yrs.), both of Lewiston
Councilor, Reuben Leitman, M.D. (3 yrs.), Lewiston

Dr. Rando turned the chair over to Dr. Carrier. Dr. Rando was given a rising vote of thanks for his fine services the past year.

There was a short discussion on how to increase attendance at meetings and make them more interesting. Several suggestions were made which are to be discussed with the program committee.

DONALD L. ANDERSON, M.D., *Secretary*

SOMERSET

The Somerset County Medical Association held its winter meeting at the Oak Pond Motel in Canaan, Maine.

The program was presented by Walton P. C. Clason, M.D. of Ellsworth, Maine. Dr. Clason discussed the clinical meaning of CO_2 and pH measurements in the body under various clinical situations. The members present were so impressed and enthused by the implications of the lecture that they voted to have the February meeting along the same lines with members presenting cases that illustrate the abnormalities described by Dr. Clason.

JOHN P. DOW, M.D., *Secretary*

HANCOCK

A meeting of the Hancock County Medical Society was held at the Brookside Restaurant in Ellsworth, Maine on January 8, 1969 with seventeen members and three guest physicians present.

Items of discussion at the business meeting were:

A report that jury duty is available to physicians who wish to serve if their practice makes this duty feasible. A doctor may make application to the Jury Selection Committee of his district if he so chooses.

The Continuing Medical Education Committee of the Hancock County Medical Society reported their first meeting with the decision to conduct a survey of the physicians of the County to find present methods of education and future interests. New members of the Committee were to be appointed from the Mount Desert and from the Blue Hill-Castine areas.

Usual and customary fee schedules to be filled in by physicians of the State of Maine have been received. The significance of filling these schedules out carefully and returning to the Blue Shield office was pointed out.

Information about the Maine Medical Association's Council action on Indian health problems is to be obtained for the next meeting of the Hancock County Medical Society.

The guest speaker, George J. Robertson, M.D. of Boston, Massachusetts, discussed the "Guest Resident Program" of the Bingham Associates Fund. His discussion was followed by remarks by Dr. Jean Curran. The discussion was a refreshing report of recent innovations that are now making it possible for bedside or patient oriented medical teaching for community physicians. Mention was made of the large and increasing numbers of students, house staff and fellowship personnel that could and indeed may have to find teaching and working relationships outside of the medical centers to the benefit of community physicians and the medical schools.

BRADLEY E. BROWNLOW, M.D., *Secretary*

YORK

The York County Medical Society meeting was held at the Henrietta D. Goodall Hospital in Sanford, Maine on January 8, 1969.

Fo'lowing a social hour and dinner, the meeting was called to order by the Vice-President, Marion K. Moulton, M.D. Dr. Moulton introduced Niles L. Perkins, M.D., Director, Bureau of Medical Care, State of Maine Department of Health and Welfare, who spoke on Medical Legislation.

The nominating committee brought in the following list of officers which were elected for 1969:

President, Leopold A. Viger, M.D., Biddeford
Vice-President, Charles S. Turville, M.D., Alfred
Secretary-Treasurer, Charles W. Kinghorn, M.D., Kittery
Delegates to the M.M.A. House of Delegates, Drs. Carl E. Richards, Sanford, Robert F. Ficker, Kennebunkport and Thomas Anton, Biddeford. Alternates, Drs. Kenneth E. Leigh, York, Irvin Dorfman, Biddeford and Paul S. Hill, Jr., Saco
Executive Committee, Drs. Walter R. Peterlein, Jr., Springvale, Carl E. Richards, Leopold A. Viger, Charles S. Turville and Charles W. Kinghorn

Charles R. Glassmire, M.D., Councilor for the First District, gave a short talk.

CHARLES W. KINGHORN, M.D., *Secretary*

Letter to the Editor

To the Editor:

I write you in an effort to inform my colleagues through your publication of an important fact-finding mission I am currently engaged in and to alert them to expect to hear from me personally.

I have taken a year's leave of absence from my private practice in New Jersey to serve with a fact-finding agency of government known as the National Commission on Product Safety. This Commission was established by Congress to develop effective means to protect Americans from unreasonable hazards related to many products commonly used in and around the home today. In addition to funding this Commission, Congress has granted us adequate powers to conduct this study.

Every physician in the country – as a consumer – will benefit from the work of this Commission. So will his family, his patients, and all Americans.

I plan to contact "front line" physicians – those dedicated and competent individuals who get the calls and see the victims of accident injuries – in a nationwide survey of product-related accidents. A questionnaire will be mailed to the medical profession's "front liners" during the month of March. The questionnaire will seek to elicit information on all product-related injuries treated during the first two weeks in April.

The last ten years have seen a rising tide of interest in and legislation for prolonging American lives, ranging from better automobile design to warnings against smoking. The National Commission on Product Safety's work is directed toward household product safety.

I am counting on the wholehearted cooperation of the medical profession for the priceless information that only physicians can make available to this Commission.

SAMUEL C. SOUTHARD, M.D., FAAP
Director, Task Force I
National Commission on Product Safety
1016 16th Street, N.W.
Washington, D.C. 20036

Book Review

Sickness and Society by Duff, R. S. and Hollingshead, A. B. Published by Harper & Row, 1968, 385 pp., $12.50.

This is a psycho-social medical study of a random sample of middle-aged patients admitted to a prominent New England teaching hospital concerning the various factors which brought them to the hospital, the care they received there, their reactions to the care and their status after discharge. The patients were divided as to medical or surgical service, and as to physician care classification – predominently private care, house staff care but on the private service, and ward service. Though the authors did observe the quality of medical judgement, their primary emphasis was on the interaction of hospital care with the psycho-social complex of individual patients and their families. Their findings are nothing short of shocking: a large proportion of the patients got themselves into the hospital partially as a solution for non-physical problems; these problems usually went unrecognized and the basic situation underlying them often was made worse by the hospital tour; some aspects of accommodation and service organization not infrequently had a dangerous effect on disease; often equally deleterious for the patient was the patient-professional communication or lack thereof.

The message of this fascinating book is that there are many very subtle aspects to hospital care and the doctor who sends patients there should not do so lightly. This particular study is incomplete in that it covers only a small group of the type of patients who are admitted and it devotes little research to the physical effects of hospitalization. The role of the hospital as an etiology factor in disease is not very thoroughly explored. Also hard statistics are given less play than case studies.

The hospital is rapidly assuming the central role in medical care. The only efforts toward quality control of medical services are devoted solely to hospitals; the modern physician is trained primarily by practitioners who spend all or nearly all of their professional lives in hospitals; and the emergency room is playing an increasingly prominent role in outpatient services. Though much concern has been expressed for the expense of this type of care, few seem to have asked if it is of use to anyone other than those with highly technical problems. The hospital is ideally suited for "crisis medicine" but not for the tedious deciphering and maintaining of chronic illness in complex life situations. This study hopefully will lead to many others which will help us decide the place and shape of the hospital in future medicine.

ELIOT T. STADLER, M.D.
West Gouldsboro, Maine 04687

DEPARTMENT OF HEALTH AND WELFARE

Continued from Page 71

graphical area served: State of Maine veterans primarily. Also accept veterans from other states. *Fee basis:* None. *Office hours:* Monday through Friday 8:00 A.M. to 4:30 P.M. Open for admission 24 hours a day.

Sponsoring Organization: Department of Mental Health and Corrections. *Title of Facility or Service:* Psychiatric Services to the Department of Health and Welfare. *Address:* Vickery-Hill Building, Chapel Street, Augusta, Maine, 04330. *Telephone:* 289-2781.

A traveling clinic which provides mental health services to children and adults who are clients of the Department of Health and Welfare as well as consultation services to professional personnel. *Serves on a routine basis clients in the Augusta area weekly on Wednesday and in the Rockland area by appointment in Augusta.* (To be concluded next month).

ACROSS THE DESK

Continued from Page 68

Nevada, North Dakota, Ohio, Oklahoma, Oregon, South Dakota, Tennessee, Texas, Utah, Vermont, Washington and Wyoming.

Rates for hospital professional liability insurance are increased 20 percent in New Jersey and Tennessee, and 10 percent in Kansas. In these states the table of increased limits factors for this line of insurance has been revised upward. This revision will result in a 50 percent rise in premiums for limits of coverage in excess of the basic limits of $5,000, for each claim and $15,000 for all claims during each annual policy period.

For lawyers' professional liability insurance, rates are increased 100 percent in California and Maryland, 70 percent in Louisiana, 30 percent in Virginia, and 15 percent in Alabama. An increase of 100 percent for Hawaii was effective Nov. 1, 1968. – *News from Insurance Information Institute*

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In addition the AMA TV network will present more than 40 hours of convention programming.

Reserve now for the Scientific Awards Dinner in honor of the Scientific Award Winners—Wednesday, July 16, 1969. Since space is limited, we suggest you make your reservations before June 30, 1969. Tickets are $10.00 each, payable in advance.

The complete scientific program, plus forms for advance registration and hotel accommodations, will be featured in JAMA, May 26, 1969.

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AMERICAN MEDICAL ASSOCIATION'S 118th ANNUAL CONVENTION



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Her urinary tract infection reveals itself through pain and discomfort.

While the pain and discomfort of a G.U. infection are anything but pleasant, the patient may be luckier than she realizes. That burning sensation (and/or frequency, urgency, dysuria) is a usually reliable sign of a urinary tract infection. And it's her good fortune that her infection won't go undetected...or untreated.

Azo Gantanol® therapy usually provides analgesic action within one-half hour, while control of the infection begins within two hours. Azo, a specific urinary analgesic, soothes inflamed mucosa to give symptomatic relief. At the same time, the antibacterial component, Gantanol (sulfamethoxazole), achieves therapeutic levels in the blood and urine, with diffusion into interstitial fluids. Azo Gantanol—a good choice when urinary tract infection reveals itself through symptomatic distress.

Before prescribing, please consult complete product information, a summary of which appears on opposite page.

Azo Gantanol®

(Each tablet contains 0.5 Gm sulfamethoxazole and 100 mg phenazopyridine HCl.)

Azo for the pain
Gantanol®
(sulfamethoxazole)
for the pathogens

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Urinary tract infections with associated pain or discomfort when due to susceptible organisms; prophylactically in urologic surgery, catheterization and instrumentation.

Contraindicated in sulfonamide-sensitive patients, pregnant females at term, premature infants, newborn infants during the first three months of life, glomerular nephritis, severe hepatitis, uremia and pyelonephritis of pregnancy with gastrointestinal disturbances.

Warnings: Use only after critical appraisal in patients with liver damage, renal damage, urinary obstruction or blood dyscrasias. If toxic or hypersensitivity reactions or blood dyscrasias occur, discontinue therapy. In closely intermittent or prolonged therapy, blood counts and liver and kidney function tests should be performed.

Precautions: Observe usual sulfonamide therapy precautions including maintenance of an adequate fluid intake. Use with caution in patients with histories of allergies and/or asthma. Patients with impaired renal function should be followed closely since renal impairment may cause excessive drug accumulation. Occasional failures may occur due to resistant microorganisms. Not effective in virus and rickettsial infections.

Adverse Reactions: Headache, nausea, vomiting, urticaria, diarrhea, hepatitis, pancreatitis, blood dyscrasias, neuropathy, drug fever, skin rash, Stevens-Johnson syndrome, injection of the conjunctiva and sclera, petechiae, purpura, hematuria or crystalluria may occur, in which case the dosage should be decreased or the drug withdrawn.

Dosage: Adults—4 tablets initially, then 2 tablets morning and evening.

How Supplied: Tablets, bottles of 50.

Roche
LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110



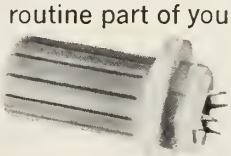


Each Cough Calmer™ contains the same active ingredients as a half-teaspoonful of Robitussin-DM® Glyceryl guaiacolate, 50 mg., Dextromethorphan hydrobromide, 7.5 mg.
A. H. Robins Company, Richmond, Virginia 23220

A·H·ROBINS

TB is still around.

In 1967 almost 45,000 new active cases were reported. Isn't that a good reason to make tuberculin testing with the white LEDERTINE™ Applicator a routine part of your physical examinations?

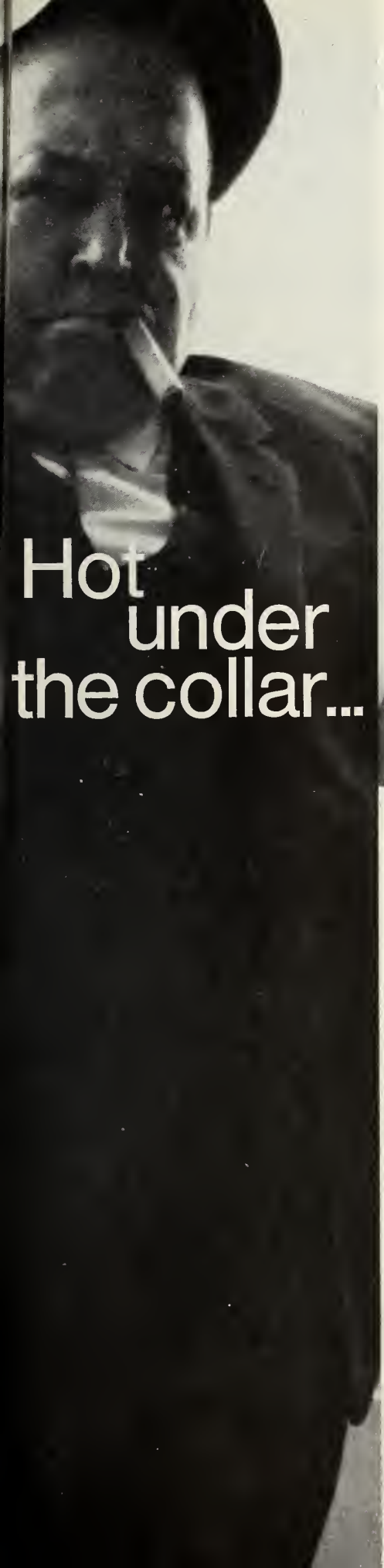


TUBERCULIN TINE TEST
(Rosenthal) with Old Tuberculin

Precautions: With a positive reaction, consider further diagnostic procedures. Use with caution in persons with active tuberculosis or known allergy to acacia. Vesiculation, ulceration, or necrosis may occur at the test site in highly sensitive persons.

Lederle LEDERLE LABORATORIES
A Division of American Cyanamid Company, Pearl River, N.Y.
472-9





Hot under the collar...



high under the cuff.

Sometimes
he forgets he has hypertension, gets hot under the collar...high under the cuff.

For such
patients, consider **Regroton®**

chlorthalidone	50 mg.
reserpine U.S.P.	0.25 mg.

To lower blood pressure
and allay anxiety in hypertension.

For brief summary of prescribing information, see next page.

RE-6392

Regroton®

Geigy

chlorthalidone 50 mg.
reserpine U.S.P. 0.25 mg.

the once-a-day tablet for anxious hypertensives

Regroton is a combination of two basic antihypertensives designed to lower blood pressure and allay anxiety in hypertension. With Regroton he can keep his shirt on and you can keep his blood pressure down.

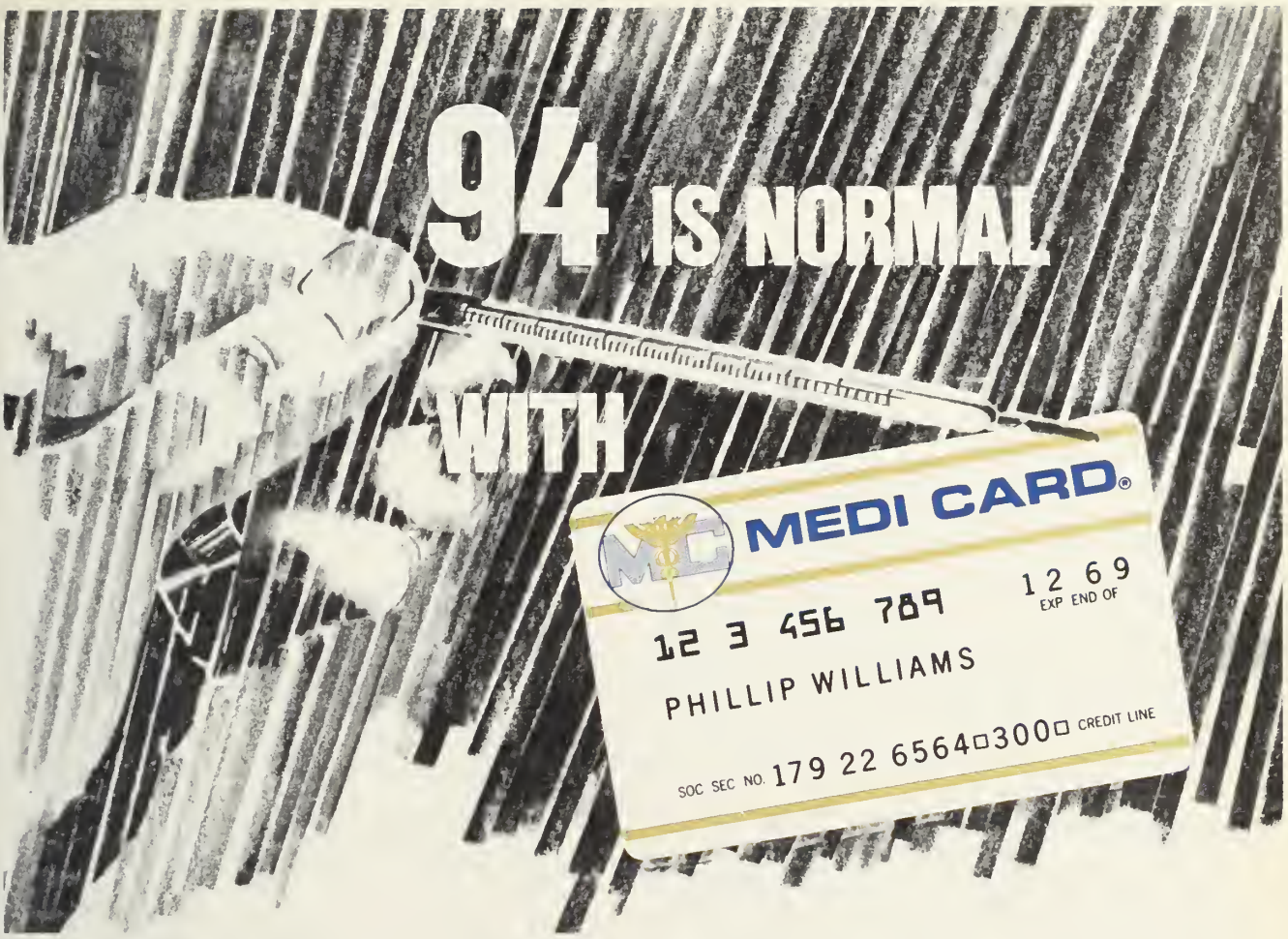
Before prescribing, please review carefully the indications, contraindications, warning, precautions, adverse reactions and dosage information below.

Regroton®
Each tablet contains:
chlorthalidone 50 mg.
reserpine U.S.P. 0.25 mg.

Indications: Hypertension.
Contraindications: History of mental depression, hypersensitivity and most cases of severe renal or hepatic diseases.
Warning: With the administration of enteric-coated potassium supplements, which should be used only when adequate dietary supplementation is not practical, the possibility of small-bowel lesions (obstruction, hemorrhage, and perforation) should be kept in mind. Surgery for these lesions has frequently been required and deaths have occurred. Discontinue coated potassium-containing formulations immediately if abdominal pain, distention, nausea, vomiting, or gastrointestinal bleeding occur. Discontinue one week before electroshock therapy, and if depression or peptic ulcer occurs.
Use in pregnancy: Because chlorthalidone may cross the placental barrier and appear in cord blood and thiazides may appear in breast milk, this drug should be used with care in pregnant patients and nursing mothers. When used in women of childbearing age, the potential benefits of the drug should be weighed against the possible hazards to the fetus. Use of chlorthalidone may result in fetal or neonatal jaundice, thrombocytopenia, and possibly other adverse reactions which have occurred in the adult. Increased respiratory secretions, nasal congestion, cyanosis and anorexia may occur in infants born to reserpine-treated mothers.
Precautions: Antihypertensive therapy with this drug should always be initiated cautiously in postsympathectomy patients and in patients receiving ganglionic blocking agents, other potent antihypertensive drugs, or curare. Reduce dosage of concomitant antihypertensive agents by at least one-half. To avoid hypotension during surgery, discontinue therapy with this agent two weeks prior to elective surgical procedures. In emergency surgery, use, if needed, anticholinergic or adrenergic drugs or other supportive measures as indicated. Because of the possibility of progression of renal damage, periodic kidney function tests are indicated. Discontinue if the BUN rises or liver dysfunction is aggravated. Hepatic coma may be precipitated. Electrolyte imbalance, sodium and/or potassium depletion may occur. If potassium depletion should occur during therapy, the drug should be discontinued and potassium supplements given, provided the patient does not have marked oliguria.
Take particular care in cirrhosis or severe ischemic heart disease and in patients receiving corticosteroids, ACTH, or digitalis. Severe salt restriction is not recommended. Use cautiously in patients with ulcerative colitis or gallstones (biliary colic may be precipitated). Bronchial asthma may occur in susceptible patients.
Adverse Reactions: The drug is generally well tolerated. The most frequent side effects are nausea, gastric irritation, vomiting, diarrhea, constipation, muscle cramps, headache, dizziness and acute gout. Other potential side effects include angina pectoris, anxiety, depression, bradycardia and ectopic cardiac rhythms (especially when used with digitalis), drowsiness, dull sensorium, hyperglycemia and glycosuria, hyperuricemia, lassitude, restlessness, transient myopia, impotence or dysuria, orthostatic hypotension which may be potentiated when chlorthalidone is combined with alcohol, barbiturates or narcotics, leukopenia, aplastic anemia, skin rashes, thrombocytopenia, agranulocytosis, nasal stuffiness, increased gastric secretions, nightmare, purpura, urticaria, ecchymosis, weakness, uveitis, optic atrophy and glaucoma, and pruritus. Eruptions and/or flushing of the skin, a reversible paralysis agitans-like syndrome, blurred vision, conjunctival injection, increased susceptibility to colds, dyspnea, weight gain, decreased libido, dryness of the mouth, deafness, anorexia, and pancreatitis when epigastric pain or unexplained G.I. symptoms develop after prolonged administration. Jaundice, xanthopsia, paresthesia, photosensitization and necrotizing angiitis are possible.
Average Dosage: One tablet daily with breakfast.
Availability: Pink, single-scored tablets in bottles of 100 and 1000.
(B)46-600-C
For details, please see complete prescribing information.

Geigy Pharmaceuticals
Division of
Geigy Chemical Corporation
Ardsley, New York 10502

RE-6392



Yes! Medi Card guarantees you 94% payment within 10 days — without recourse.

This unique professional credit card exclusively for health services helps you get out of the credit and collection business . . . frees your capital for investment. You merely mail your draft to Medi Card on simple, easy-to-use forms supplied at no cost. Medi Card pays you promptly, less only a 6% service fee. There is no commitment on your part, nothing to join, no directory or listing of any kind. *Your patients benefit, in other ways, too!* Medi Card makes from $100 to $5000 available to patient-members exclusively for professional health services . . . lets them take up to 24 months to pay. As an additional benefit, Medi Card offers a round-the-clock computerized emergency medical information service for cardholders.

94 IS NORMAL with Medi Card
Medi Card guarantees you payment within 10 days . . . without recourse.

EXCLUSIVELY FOR THE POST-PAYMENT OF THESE UNIVERSAL HEALTH SERVICES:
☐ MEDICAL ☐ DENTAL ☐ HOSPITAL ☐ NURSING HOME ☐ PHARMACY
AND OTHER BONA FIDE HEALTH SERVICE CHARGES

MEDI CARD, INC.
P.O. Box 650
Bala Cynwyd, Pa. 19004



Medi Card answers some frequently asked questions.

Q. Does Medi Card conflict with pre-paid health plans?

A. No. On the contrary, Medi Card both complements and supplements Blue Cross/Blue Shield and other pre-paid insurance programs; that portion which your patient would normally pay by cash may be charged to Medi Card.

Q. Can Medi Card now take over my patients' accounts receivable?

A. Medi Card cannot take over your patients' accounts receivable at this time but will process all patient applications received from you without charge.

Q. Do you make an individual credit check on each one of my patients?

A. Every application for Medi Card receives a thorough credit check before any card is issued.

Q. May I mail applications out with my monthly billing?

A. Yes. Applications to Medi Card are included in your professional kit and additional ones are available without charge.

Q. What methods will you use for collecting delinquent accounts? How does my state professional society feel about this?

A. Delinquent accounts will be automatically transferred to the same collection agency currently used by your local professional society.

Q. How does the AMA, the ADA, the AHA and my state professional society feel about Medi Card?

A. All terms of the Medi Card program have been presented and thoroughly discussed with these professional associations. They have informed us that they neither approve nor disapprove of Medi Card, they have no objections to our presenting the program to the individual members of the professions.

Q. Do I have to join, or become a member of Medi Card? Is there anything to pay in order to participate in the Medi Card program?

A. There is nothing to pay. You neither join Medi Card nor make any agreement with Medi Card. You merely honor the credit card upon its presentation, and are required to sign a statement accompanying the patient's first draft acknowledging your understanding of the program and Medi Card's 6% service charge.

Q. Can a card holder's Medi Card be used by various members of the family?

A. Medi Card may be used by any member of the family providing the card holder signs the Medi Card draft.

Q. What about Medi Card's financial responsibility?

A. Medi Card, a publicly held corporation, is associated in this program with Financial Services, Inc., a wholly owned subsidiary of the Diners Club.

Q. How much paperwork is involved?

A. The Medi Card draft is the simplest form ever devised for the payment of professional fees and services. Only two lines of the draft have been allotted for briefly outlining treatment. It is as fast as writing a personal check.

Q. Is there recourse to me in the event the patient does not pay Medi Card?

A. There is no recourse whatsoever. All the collection responsibility lies with Medi Card thus freeing you to maintain a professional relationship with your patient.

Q. Under what conditions will Medi Card refuse to pay a draft?

A. (1) Where the charge is incurred after the expiration date shown on the card. (2) Failure to fill out and mail processing card to us before, or along with, first draft.

Q. How much of my bill will Medi Card pay?

A. Medi Card will pay you up to the amount of credit shown on the face of the card, less the service charge.

Q. How does Medi Card protect the cardholder?

A. (1) Medi Card protects the cardholder by providing funds for professional services in amounts from $100 to $5,000 when they are needed. (2) Medi Card further protects the cardholder and his family by providing a 24-hour nationwide emergency medical information service making personal medical information available immediately through the use of a Medi Card toll-free telephone credit call. (3) In addition, this service provides all necessary professional payment information to the caller.

Q. How will I know each individual patient's Credit Limit?

A. Each patient's Credit Limit is clearly shown on the face of his Medi Card.

Q. Will you publish a list of professional participants?

A. No. Medi Card will not publish such a list because professional participants are not members of Medi Card.

If n
plan

If a cardholder pays his Medi Card charge in full within 25 days, there is no service charge. If he elects to use the extended payment plan, Medi Card charges him 1½% per month on the unpaid balance, (or less, according to state legal rate). He may pay his balance at any time, during the extended payment period.

SEND FOR FREE KIT containing a supply of draft forms and complete details about Medi Card and how it helps both you and your patients. Use the handy pre-paid, pre-addressed card below, or write to Medi Card:

MEDI CARD, INC.
P.O. Box 650
Bala Cynwyd, Pa. 19004

Gentlemen: I have not received my Medi Card kit. Please send one as soon as possible to:

ATTENTION: _____

ADDRESS _____

CITY _____ STATE _____

ZIP _____

[redacted]

containing a supply of [redacted] forms and complete details about Medi Card and how it helps both you and your patients. Use the handy pre-paid pre-addressed card below, or write to Medi Card:

MEDI CARD, INC.
P.O. Box 650
Bala Cynwyd, Pa. 19004

FIRST CLASS
PERMIT NO. 354
PHILA., PA.

BUSINESS REPLY MAIL
NO POSTAGE STAMP NECESSARY IF MAILED IN THE UNITED STATES

Postage Will Be Paid By

MEDI CARD INC.
P.O. BOX 650
BALA CYNWYD, PA. 19004



For the "Cheater Eater"

Formulas: Each 'Dexamyl' *Spansule* capsule No. 1 contains 10 mg. of Dexedrine® (brand of dextroamphetamine sulfate) and 1 gr. of amobarbital, derivative of barbituric acid (Warning, may be habit forming). Each 'Dexamyl' *Spansule* capsule No. 2 contains 15 mg. of Dexedrine (brand of dextroamphetamine sulfate) and 1½ gr. of amobarbital (Warning, may be habit forming).
Before prescribing, see complete prescribing information in SK&F literature or *PDR*.
Contraindications: Hyperexcitability, undue restlessness, hyperthyroidism, porphyria; in patients on MAO inhibitors.
Precautions: Use with caution in patients hypersensitive to sympathomimetics or barbiturates and in coronary or cardiovascular disease or severe hypertension. Excessive use of the amphetamines by unstable individuals may result in a psychological dependence. Rarely, symptoms of toxic psychosis (hallucinations, confusion, panic states, etc.) may occur with amphetamines, usually after prolonged high dosage. In these instances, withdraw the medication. Use cautiously in pregnant patients, especially in the first trimester.
Adverse Reactions: Overstimulation, restlessness, insomnia, g.i. disturbances, diarrhea, palpitation, tachycardia, elevated blood pressure, tremor, sweating, impotence and headache.
Supplied: In bottles of 50.

Dexamyl®

brand of dextroamphetamine sulfate and amobarbital

Spansule®

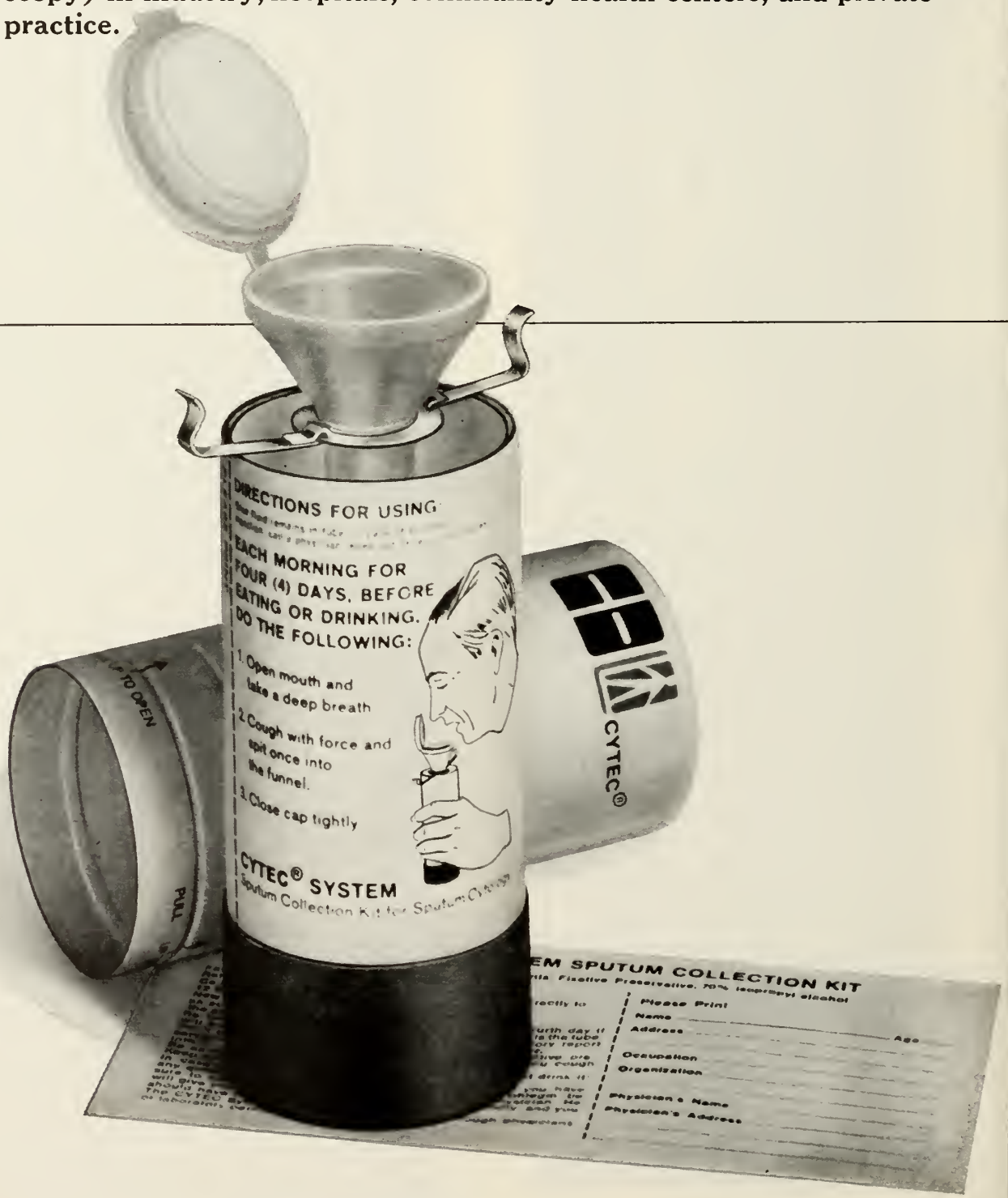
brand of sustained release capsules

curbs appetite
encourages normal activity
dispels diet discouragement

SK&F
Smith Kline & French Laboratories

AN IMPORTANT MESSAGE ON SPUTUM CYTOLOGY

Sputum Cytology—practical and economical as a routine diagnostic aid for the detection of lung cancer to be used in conjunction with other diagnostic techniques (such as roentgenology and bronchoscopy) in industry, hospitals, community health centers, and private practice.



AN AID TO THE MEDICAL COMMUNITY: Sputum cytologic screening is an aid in lung cancer detection when used with professional judgment as part of the diagnostic workup of the patient.

Pulmonary exfoliative cytology is a useful diagnostic aid when used in conjunction with other diagnostic techniques in early lung cancer detection; however, problems in sputum collection, difficulties in preparation, and expenses involved have made it impractical for routine screening. As a consequence, it has not been used to the fullest in private, industrial, and public health programs. The CYTEC® System of Sputum Cytology helps overcome most of these problems.

The CYTEC System is sputum cytology with rapidity

Developed by Nuclear Research Associates, Inc., the CYTEC System provides reliable collection, preservation, separation, and concentration of cells as well as automated staining, all with accuracy, uniformity, speed, and simplicity.

This System has been tested for the last few years in industrial and commercial pilot investigation programs as well as in numerous major hospitals.

CYTEC is simple, convenient and easy to use

The CYTEC System provides a sputum collection kit containing a plastic test tube with a built-in funnel which facilitates the collection of early-morning "deep cough" specimens. A tight-fitting cap creates a leak-proof receptacle containing a preservative/fixative which eliminates the need for refrigeration.

The patient simply collects the sputum produced by early-morning "deep coughs," on four separate days, closes the test tube and returns it to his physician, medical director at his place of employment, or public health officer who can then send it in the self-contained mailer directly to our Ca Detection Laboratories for analysis. Reports will be returned only to the designated physician. Photomicrographs showing morphologic cellular changes, if present, accompany the physician's report.

CYTEC can be obtained only through the medical community

CYTEC is being offered *only* to practicing physicians including medical directors of industrial, community, and public health programs. It is being offered as a diagnostic aid to be used in conjunction with other techniques. CYTEC screening results serve as indicators for possible further workup.

A few words about Nuclear Research Associates, Inc., and its Ca Detection Laboratories

Nuclear Research Associates, Inc. is an interdisciplinary organization of physicians, physicists, biologists, chemists, and engineers working in the physical, biological, and medical sciences. The Ca Detection Laboratories represents a portion of Nuclear's recently established biomedical division and is devoted to research and technology in the cancer detection field. CYTEC is the first development to be offered to the medical community by the biomedical division. Others are on their way.

Professional information available on request.

Ca Detection Laboratories
12 Nevada Drive
New Hyde Park, N.Y. 11040



New England Distributors:
Thomas W. Reed Co.
Litton Medical Products, Inc.
66 Brainerd Road
Allston, Massachusetts 02134
Phone (617) 731-5100

Professional Equipment Co.
Litton Medical Products, Inc.
Hamden, Connecticut 06514
Phone (203) 787-6541

CYTEC® is a registered trademark of Nuclear Research Associates, Inc.

BLUE CROSS AND OTHER INSURANCES ARE ACCEPTED



ANDREW FERGUS, M.D.
Diplomate, American Board of Psychiatry
Chief of Staff

TAKEO KAWAMURA, M.D.
Psychiatrist
Sec. of Staff

- Utilizing all accepted forms of Psychiatric treatment.
- Alcoholics

The Utterback Private Hospital

31 Kenduskeag Avenue **(Telephone 945-4555)** **Bangor, Maine**

Beautful Grounds, Large Rooms with Bath, Mental Health Care for the Aged and Convalescent Care. Reasonable Rates

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The Doctor's Agency

Endorsed by the Maine Medical Association

NOYES & CHAPMAN

General Insurance

465 Congress Street

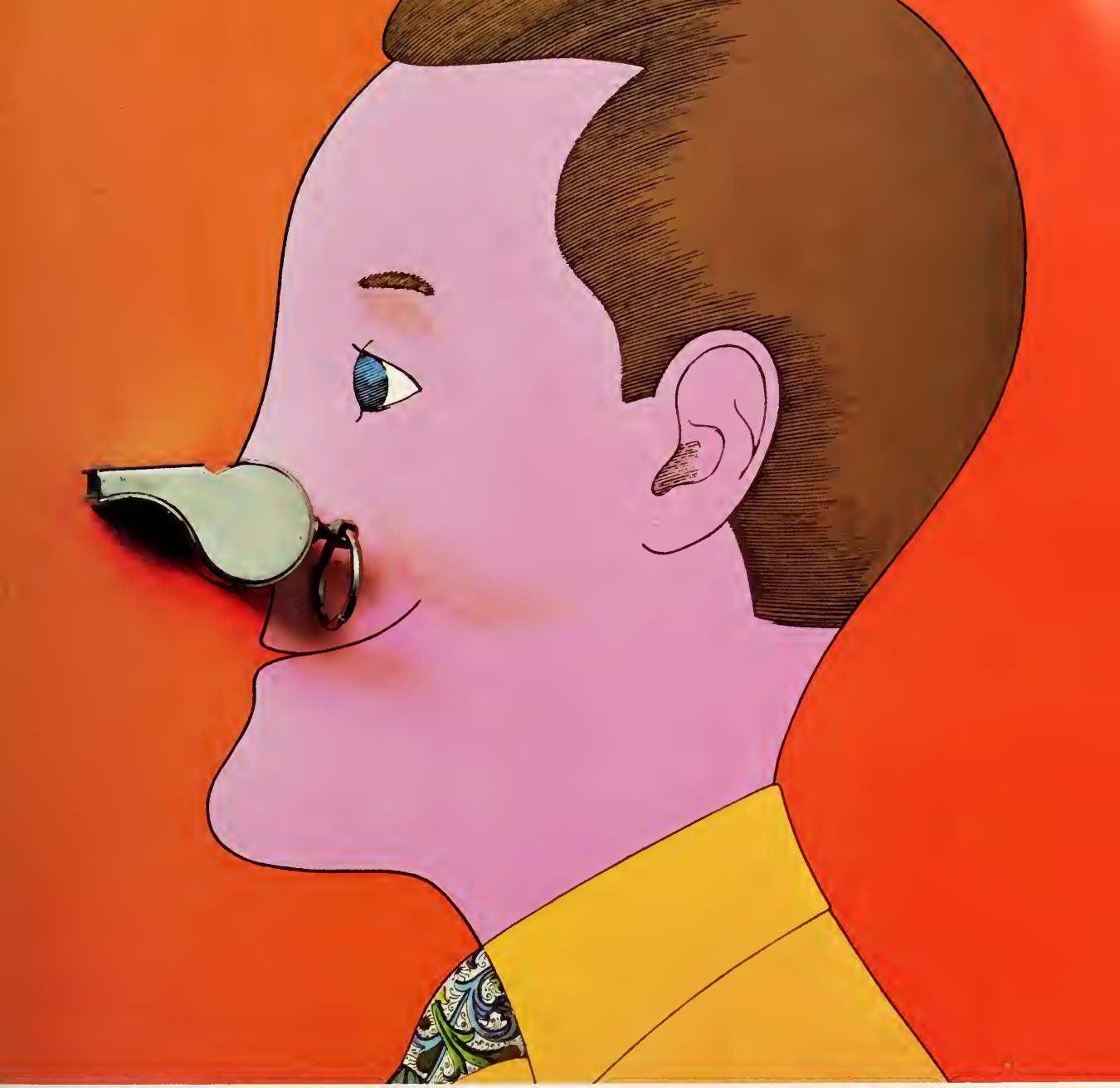
Portland, Maine

SPECIALIST IN MALPRACTICE INSURANCE

Serving Maine doctors in all forms of insurance for over 90 years

LAWRENCE D. CHAPMAN 772-2841

EDWARD D. NOYES III



Nose clear as a whistle

(THANKS TO DIMETAPP®)

Dimetapp Extentabs® does an outstanding job of helping to clear up the stuffiness, drip and congestion of colds and upper respiratory allergies and infections. Each Extentab keeps working up to 12 hours. And for most patients drowsiness or overstimulation is unlikely. Try Dimetapp. It clearly works.

FOR UPPER RESPIRATORY ALLERGIES AND INFECTIONS

Dimetapp Extentabs®

Dimetane® (brompheniramine maleate), 12 mg.; phenylephrine HCl, 15 mg.; phenylpropanolamine HCl, 15 mg.

UP TO 12 HOURS CLEAR BREATHING ON ONE TABLET

Indications: Dimetapp is indicated for symptomatic relief of the allergic manifestations of respiratory illnesses, such as the common cold and bronchial asthma, seasonal allergies, sinusitis, rhinitis, conjunctivitis, and otitis.
Contraindications: Hypersensitivity to antihistamines. Not recommended for use during pregnancy.
Precautions: Until patient's response has been determined, he should be cautioned against engaging in operations requiring alertness. Administer with care to patients with cardiac or peripheral vascular diseases or hypertension.
Side Effects: Hypersensitivity reactions including skin rashes, urticaria, hypotension and thrombocytopenia, have been reported on rare occasions. Drowsiness, lassitude, nausea, giddiness, dryness of the mouth, mydriasis, increased irritability or excitement may be encountered.
Dosage: 1 Extentab morning and evening.
Supplied: Bottles of 100 and 500.

A.H. ROBINS COMPANY
RICHMOND, VA. 23220

A·H·ROBINS



Owner Breaks Arm When Yacht Runs Aground

Schuyler, Oct. 31. Harry Waters of Covesville incurred a fractured arm [illegible] acht [illegible] ck a large rock tially capsized. The fire depart e had to rescue Waters by small o Damage to the yacht is estimat

Hasn't the skipper had enough excitement for one day?

For the patient who has been through an accident, the worry and anxiety following the mishap may actually heighten the perception of pain. This is why there's a classic ¼ grain *sedative* dose of phenobarbital in Phenaphen with Codeine—to take the nervous "edge" off, so the rest of the formula can control the pain more effectively.

A. H. Robins Company, Richmond, Va. 23220 A·H·ROBINS

Phenaphen® with Codeine

Phenaphen with Codeine Nos. 2, 3, or 4 contains: Phenobarbital (¼ gr.), 16.2 mg. (warning: may be habit forming); Aspirin (2½ gr.), 162.0 mg.; Phenacetin (3 gr.), 194.0 mg.; Hyoscyamine sulfate, 0.031 mg.; Codeine Phosphate, ¼ gr. (No. 2), ½ gr. (No. 3), or 1 gr. (No. 4) (warning: may be habit forming).

The compound analgesic that calms instead of caffeinates

Indications: Phenaphen with Codeine provides relief in severer grades of pain, on low codeine dosage, with minimal possibility of side effects. Its use frequently makes unnecessary the use of addicting narcotics. **Contraindications:** Hypersensitivity to any of the components. **Precautions:** As with all phenacetin-containing products excessive or prolonged use should be avoided. **Side effects:** Side effects are uncommon, although nausea, constipation and drowsiness may occur. **Dosage:** Phenaphen No. 2 and No. 3—1 or 2 capsules every 3 to 4 hours as needed; Phenaphen No. 4—1 capsule every 3 to 4 hours as needed. For further details see product literature.



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Which is better for you?

5%

with strings

or

4.75%

without strings

It all depends. That's why we have both. 5% single payment certificates mature in 6 months and require a minimum balance of $2,000. They earn 4% when not held to maturity. Automatically renewable. Meanwhile, our 200 Plan Investment Plan requires a $200 minimum deposit and pays 4.75% per year, from day of receipt to withdrawal. No withdrawal notice required. If you want 5%, we have it — plus a versatile 4.75%. The choice is yours.



FEDERAL
LOAN AND BUILDING ASSOCIATION
SAVINGS & LOANS
MONUMENT SQ. / DOWNTOWN PORTLAND
MILL CREEK / SOUTH PORTLAND

So he'll breathe easier:

relieve anxiety while you relieve pain.

Relief of pain is usually a major goal in traumatic conditions. But often of importance, too, is alleviation of anxiety and tension that may heighten patient discomfort.

Single-prescription, non-narcotic Equagesic may effectively relieve pain. *And* ease anxiety and tension.

TABLETS

Equagesic®

(meprobamate and ethoheptazine citrate with aspirin)

Wyeth®

IN BRIEF.

Contraindications: History of sensitivity or severe intolerance to aspirin, meprobamate or ethoheptazine citrate.

Warnings: USE IN PREGNANCY: Safety for use during pregnancy or lactation has not been established; therefore, it should be used in pregnant patients or women of child-bearing age only when the physician judges its use essential to the patient's welfare.

Precautions: Keep out of reach of children. Not recommended for patients 12 years old or less. Carefully supervise dose and amounts prescribed, especially for patients prone to overdose themselves. Excessive prolonged use of meprobamate in susceptible persons—as alcoholics, ex-addicts, severe psychoneurotics—has resulted in dependence or habituation. Withdraw gradually after prolonged excessive dosage to avoid possibly severe withdrawal reactions including epileptiform seizures. Warn patients of possible reduced alcohol tolerance, with resultant slowed reactions and impaired judgment and coordination. If drowsiness, ataxia or visual disturbances (impairment of accommodation and visual acuity) occur, reduce dose. If symptoms persist, patients should not operate machinery or drive. After meprobamate overdose, prompt sleep, reduction of blood pressure, pulse and respiratory rates to basal levels, and hyperventilation are reported. Give cautiously and in small amounts to patients with suicidal tendencies. Treat attempted suicide (has resulted in coma, shock, vasomotor and respiratory collapse and anuria) with gastric lavage and appropriate symptomatic therapy (CNS stimulants and pressor amines as indicated). Two instances of accidental or intentional significant overdosage with ethoheptazine and aspirin have been reported. These were accompanied by CNS depression (drowsiness and lightheadedness) but resulted in uneventful recovery. On basis of pharmacologic data, CNS stimulation could be anticipated, with nausea, vomiting and salicylate intoxication (requires induced vomiting or gastric lavage, specific parenteral electrolyte therapy for ketoacidosis and dehydration, and observation for hypoprothrombinemic hemorrhage [usually requires whole blood transfusions]).

Adverse Reactions: Ethoheptazine and aspirin may cause nausea with or without vomiting and epigastric distress, in a small percentage of patients. Dizziness is rare at recommended dosage. Meprobamate may cause drowsiness, ataxia and rarely allergic or idiosyncratic reactions. These reactions, sometimes severe, can develop in patients receiving only 1 to 4 doses. Such patients may have had no previous contact with meprobamate and may or may not have an allergic history. Mild reactions are characterized by urticarial or erythematous maculopapular rash. Acute nonthrombocytopenic purpura with cutaneous petechiae, ecchymoses, peripheral edema and fever have been reported. If allergic reaction occurs, discontinue meprobamate; do not reinstitute. Severe reactions, observed very rarely, include fever, fainting spells, angioneurotic edema, bronchial spasms, hypotensive crises (1 fatal case), anaphylaxis, stomatitis and proctitis (1 case) and hyperthermia. These cases should be treated symptomatically including, when indicated, such medication as epinephrine, antihistamine and possibly hydrocortisone. A few cases of leukopenia, usually transient, have been reported on continuous use. Rarely, aplastic anemia (1 fatal case), thrombocytopenic purpura, agranulocytosis, and hemolytic anemia have been reported, almost always in presence of known toxic agents.

Overdosage: See precautions section for management of overdosage.

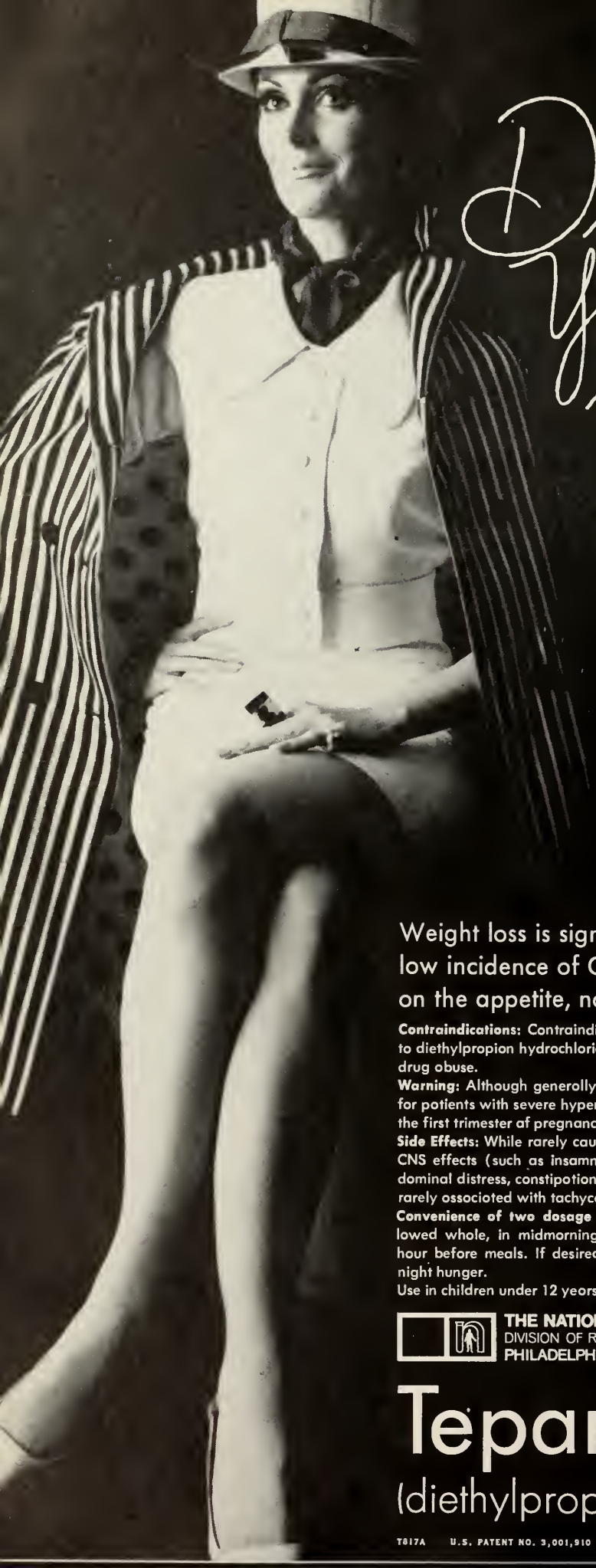
Composition: 150 mg. meprobamate, 75 mg. ethoheptazine citrate and 250 mg. aspirin per tablet.

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See next page for prescribing informati



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Contraindication: History of hypersensitivity to demethylchlortetracycline.

Warning: In renal impairment, usual doses may lead to excessive accumulation and liver toxicity. Under such conditions, lower than usual doses are indicated, and, if therapy is prolonged, serum level determinations may be advisable. A photodynamic reaction to natural or artificial sunlight has been observed. Small amounts of drug and short exposure may produce an exaggerated sunburn reaction which may range from erythema to severe skin manifestations. In a smaller proportion, photoallergic reactions have been reported. Patients should avoid direct exposure to sunlight and discontinue drug at the first evidence of skin discomfort. Necessary subsequent courses of treatment with tetracyclines should be carefully observed

Precautions: Overgrowth of nonsusceptible organisms may occur. Constant observation is essential. If new infections appear, appropriate measures should be taken. In infants, increased intracranial pressure with bulging fontanels has been observed. All signs and symptoms have disappeared rapidly upon cessation of treatment.

Side Effects: Gastrointestinal system—anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis pruritus ani. Skin—maculopapular and erythematous rashes; a rare case of exfoliative dermatitis has been reported. Photosensitivity onycholysis and discoloration of the nails (rare). Kidney—rise in BUN apparently dose-related. Transient increase in urinary output, sometimes accompanied by thirst (rare). Hypersensitivity reactions—urticaria, angioneurotic edema, anaphylaxis. Teeth—dental staining (yellow-brown) in children of mothers given this drug during the latter half of pregnancy, and in children given the drug during the neonatal period, infancy and early childhood. Enamel hypoplasia has been seen in a few children. If adverse reaction or idiosyncrasy occurs, discontinue medication and institute appropriate therapy. Demethylchlortetracycline may form a stable calcium complex in any bone-forming tissue with no serious harmful effects reported thus far in humans.

Average Adult Daily Dosage: 150 mg q.i.d. or 300 mg b.i.d. Should be given 1 hour before or 2 hours after meals, since absorption is impaired by the concomitant administration of high calcium content drugs, foods and some dairy products. Treatment of streptococcal infections should continue for 10 days, even though symptoms have subsided.

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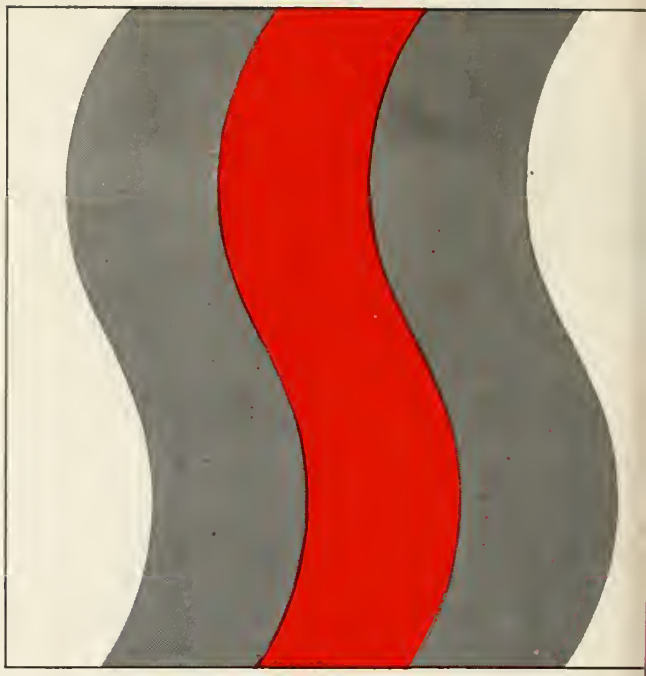
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Indications: Indicoted when onxiety, tension ond opprehension ore significont components of the clinicol profile.
Contraindications: Patients with known hypersensitivity to the drug.
Warnings: Caution potients about possible combined effects with alcohol and other CNS depressonts. As with all CNS-octing drugs, caution patients against hozardous occupotions requiring complete mental alertness (e.g., operating mochinery, driving). Though physical and psychological dependence hove rorely been reported on recommended doses, use coution in odministering to oddiction-prone individuols or those who might increose dosoge; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, hove been reported. Use of ony drug in pregnancy, lactotion, or in women of childbearing age requires that its potential benefits be weighed against its passible hazards.
Precautions: In the elderly and debilitoted, ond in children over six, limit to smallest effective dosoge (initially 10 mg or less per day) to preclude ataxia or oversedatian, increasing gradually os needed ond talerated. Not recommended in children under six. Though generolly not recommended, in combination theropy with other psychotropics seems indicated, carefully consider individual phormocologic effects, particularly in use af potentiating drugs such as MAO inhibitors ond phenothiazines. Observe usual precoutians in presence of impaired renol or hepatic functian. Paradaxical reoctions (e.g., excitement, stimulation and acute rage) have been reported in psychiotric potients ond hyperactive aggressive children. Empl usual precautions in treatment of onxiety states with evidence of impending depression; suicidal tendencies may be present ond protective measure necessory. Varioble effects on blood coogulation have been reparted very rarely in patients receiving the drug ond oral onticoagulonts; causal relotionship has not been established clinically.
Adverse Reactions: Drawsiness, otoxio and confusion may occur, especiall in the elderly ond debilitated. These ore reversible in most instonces by proper dosage adjustment, but are alsa occasionally observed ot the lawe dosage ranges. In o few instonces syncope hos been reparted. Alsa encountered are isolated instonces of skin eruptians, edemo, minor menstruc irregularities, nauseo and constipation, extrapyramidal symptoms, increa and decreased libido—all infrequent and generally contralled with dosag reduction; chonges in EEG potterns (low-voltage fost activity) may appea during and ofter treatment; blaod dyscrosias (including agranulacytasis), jaundice ond hepatic dysfunction have been reported occasionally, makir periodic blood counts and liver function tests odvisoble during protracted theropy.

1969 Annual Session
The Samoset, Rockland
June 15, 16, 17

THE JOURNAL
of
The Maine Medical Association

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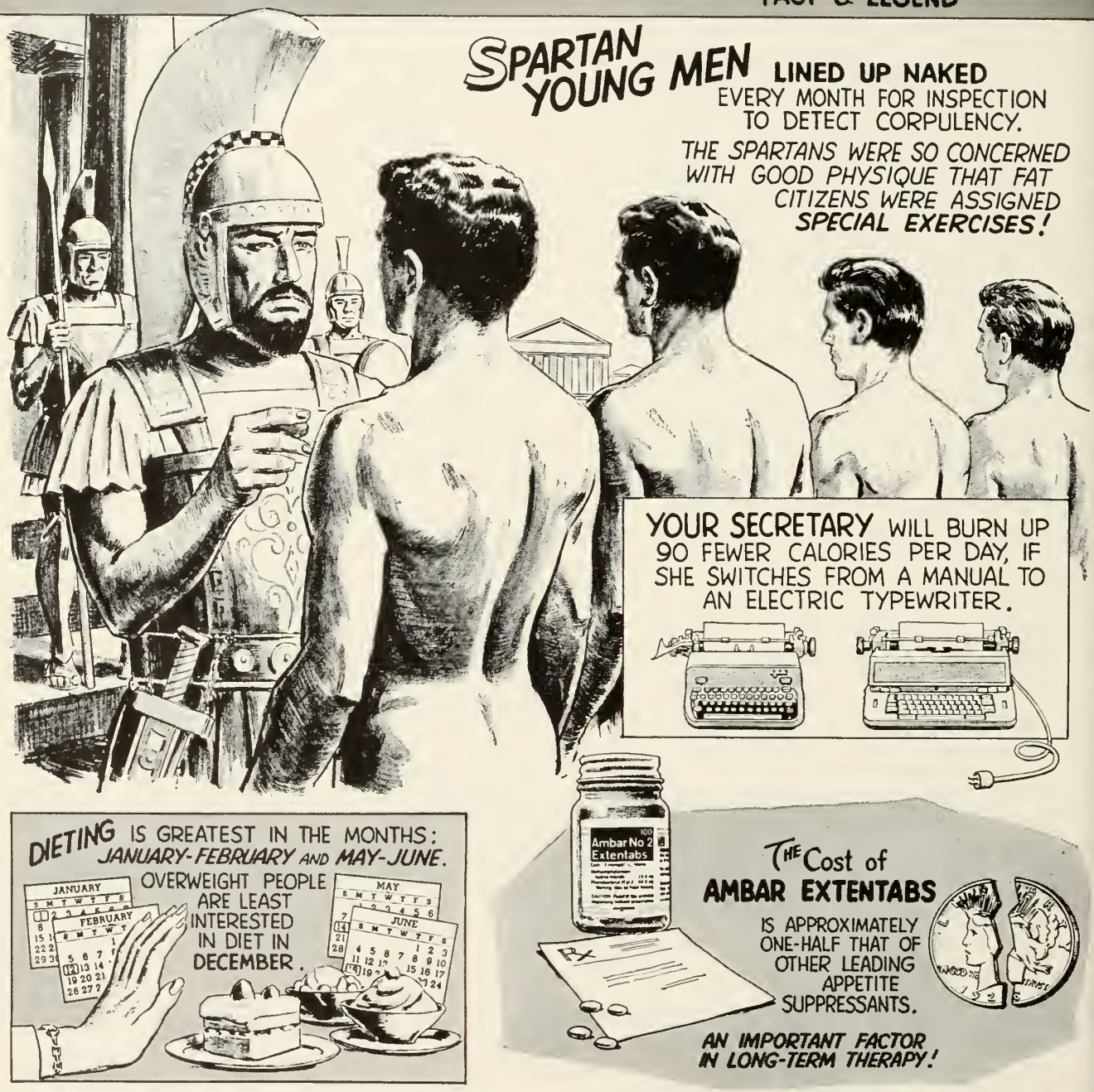


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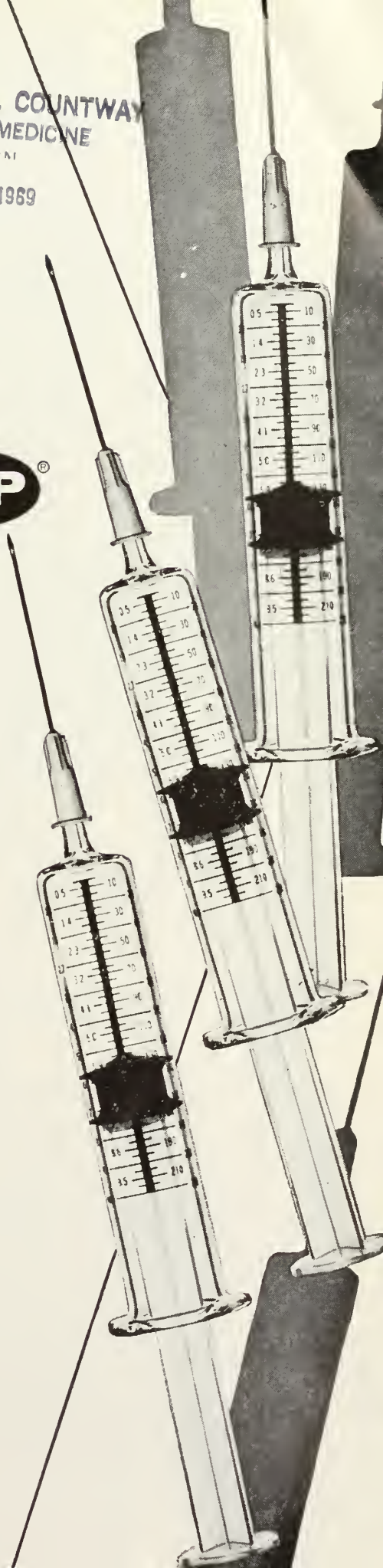
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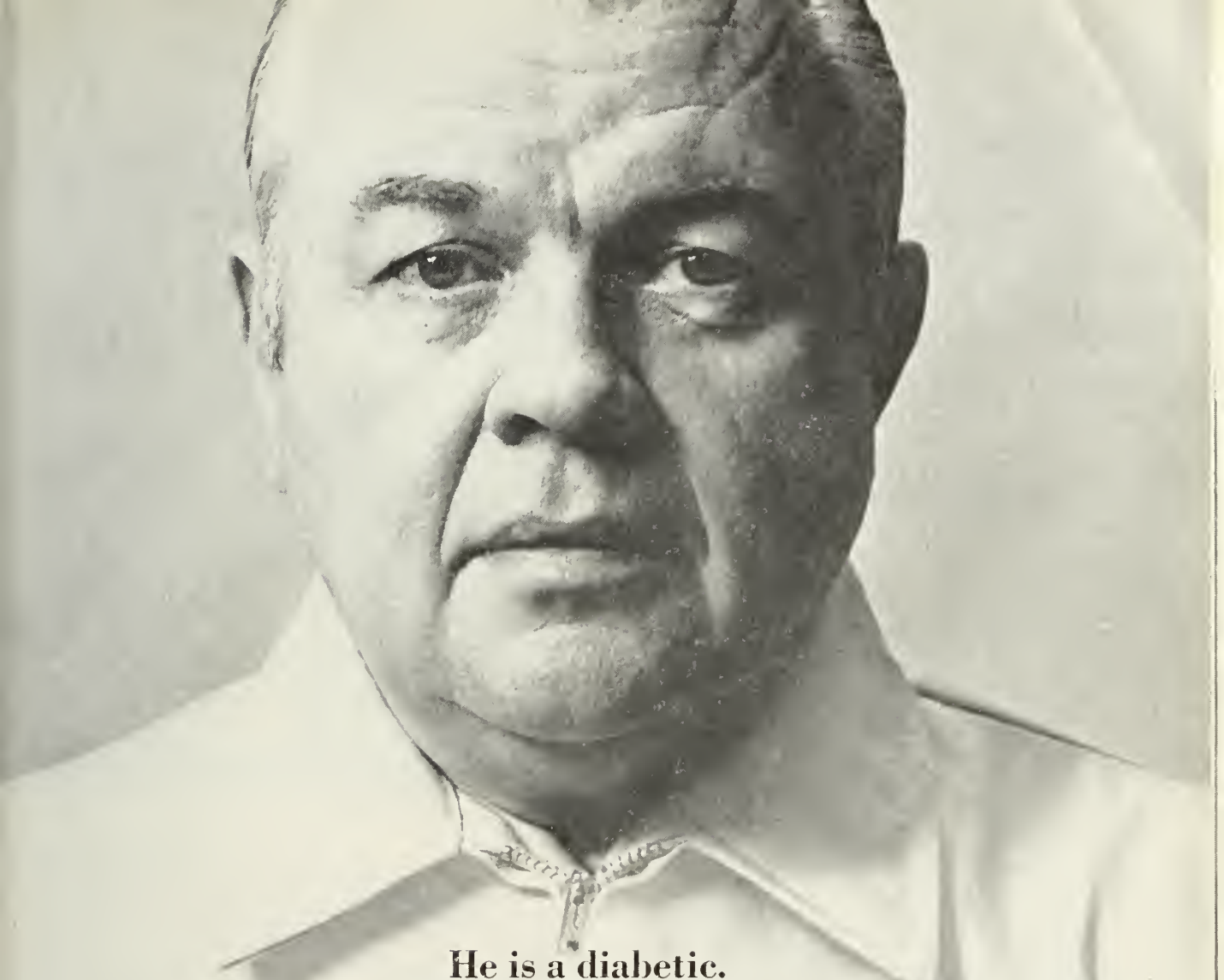
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Precautions: Overgrowth of nonsusceptible organisms may occur. Constant observation is essential. If new infections appear, appropriate measures should be taken. In infants, increased intracranial pressure with bulging fontanels has been observed. All signs and symptoms have disappeared rapidly upon cessation of treatment.

Side Effects: Gastrointestinal system—anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis, pruritus ani. Skin—maculopapular and erythematous rashes; a rare case of exfoliative dermatitis has been reported. Photosensitivity; onycholysis and discoloration of the nails (rare). Kidney—rise in BUN, apparently dose related. Transient increase in urinary output, sometimes accompanied by thirst (rare). Hypersensitivity reactions—urticaria, angioneurotic edema, anaphylaxis. Teeth—dental staining (yellow-brown) in children of mothers given this drug during the latter half of pregnancy, and in children given the drug during the neonatal period, infancy and early childhood. Enamel hypoplasia has been seen in a few children. If adverse reaction or idiosyncrasy occurs, discontinue medication and institute appropriate therapy. Demethylchlortetracycline may form a stable calcium complex in any bone-forming tissue with no serious harmful effects reported thus far in humans.

Average Adult Daily Dosage: 150 mg q.i.d. or 300 mg b.i.d. Should be given 1 hour before or 2 hours after meals, since absorption is impaired by the concomitant administration of high calcium content drugs, foods and some dairy products. Treatment of streptococcal infections should continue for 10 days, even though symptoms have subsided.

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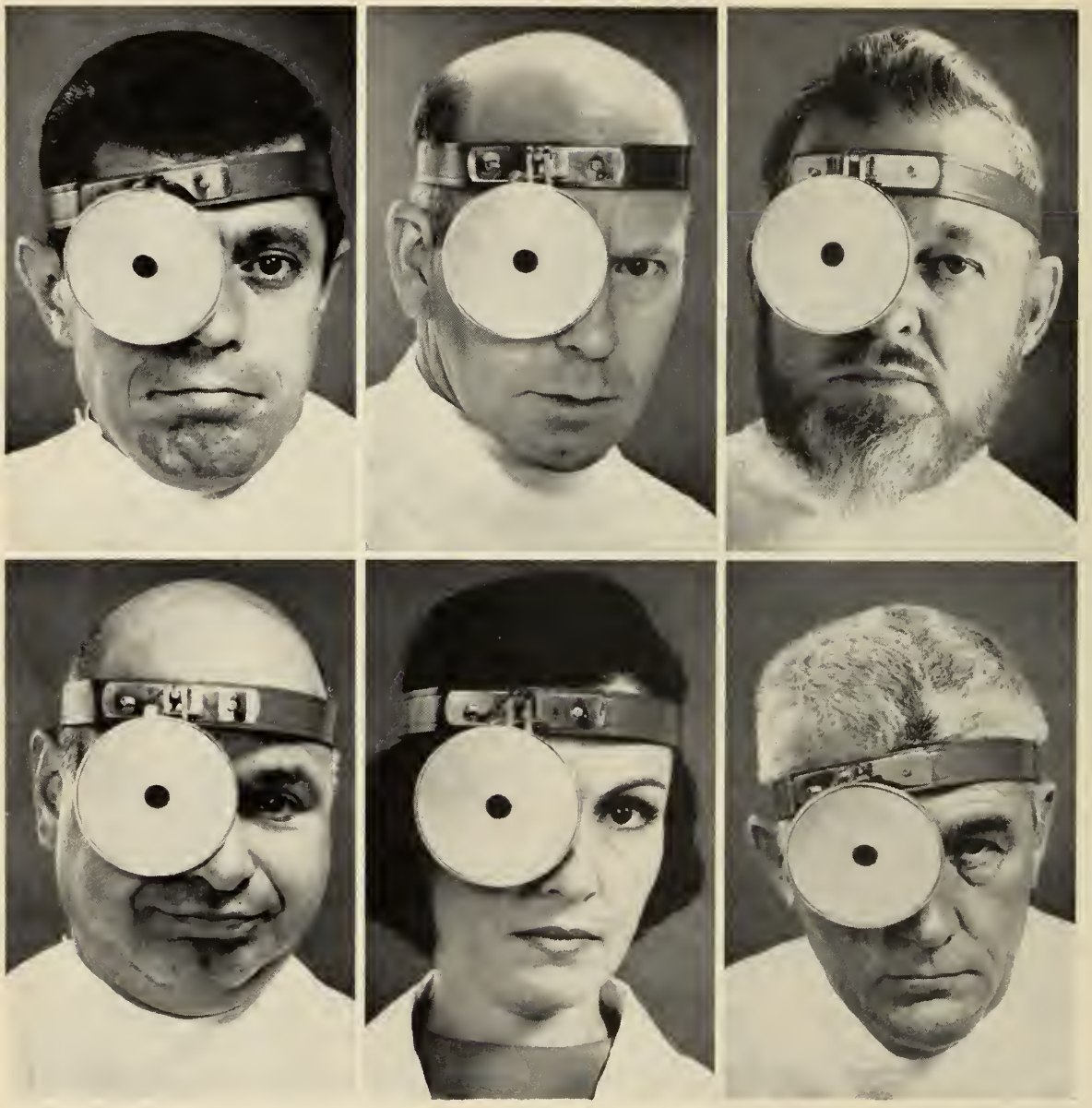
Precautions: There have been infrequent reports of leukopenia and/or agranulocytosis and convulsive seizures. In epileptic patients, anticonvulsant medication should also be maintained. Pigmentary retinopathy may be avoided by remaining within the recommended limits of dosage. Administer cautiously to patients participating in activities requiring complete mental alertness (e.g., driving). Orthostatic hypotension is more common in females than in males. Do not use epinephrine in treating drug-induced hypotension. Daily doses in excess of 300 mg. should be used only in severe neuropsychiatric conditions.

Adverse Reactions: *Central Nervous System*—Drowsiness, especially with large doses, early in treatment; infrequently, pseudoparkinsonism and other extrapyramidal symptoms; nocturnal confusion, hyperactivity, lethargy, psychotic reactions, restlessness, and headache. *Autonomic Nervous System*—Dryness of mouth, blurred vision, constipation, nausea, vomiting, diarrhea, nasal stuffiness, and pallor. *Endocrine System*—Galactorrhea, breast engorgement, amenorrhea, inhibition of ejaculation, and peripheral edema. *Skin*—Dermatitis and skin eruptions of the urticarial type, photosensitivity. *Cardiovascular System*—Changes in the terminal portion of the electrocardiogram have been observed in some patients receiving the phenothiazine tranquilizers, including Mellaril (thioridazine hydrochloride). While there is no evidence at present that these changes are in any way precursors of any significant disturbance of cardiac rhythm, several sudden and unexpected deaths apparently due to cardiac arrest have occurred in patients previously showing electrocardiographic changes. The use of periodic electrocardiograms has been proposed but would appear to be of questionable value as a predictive device. *Other*—A single case described as parotid swelling.

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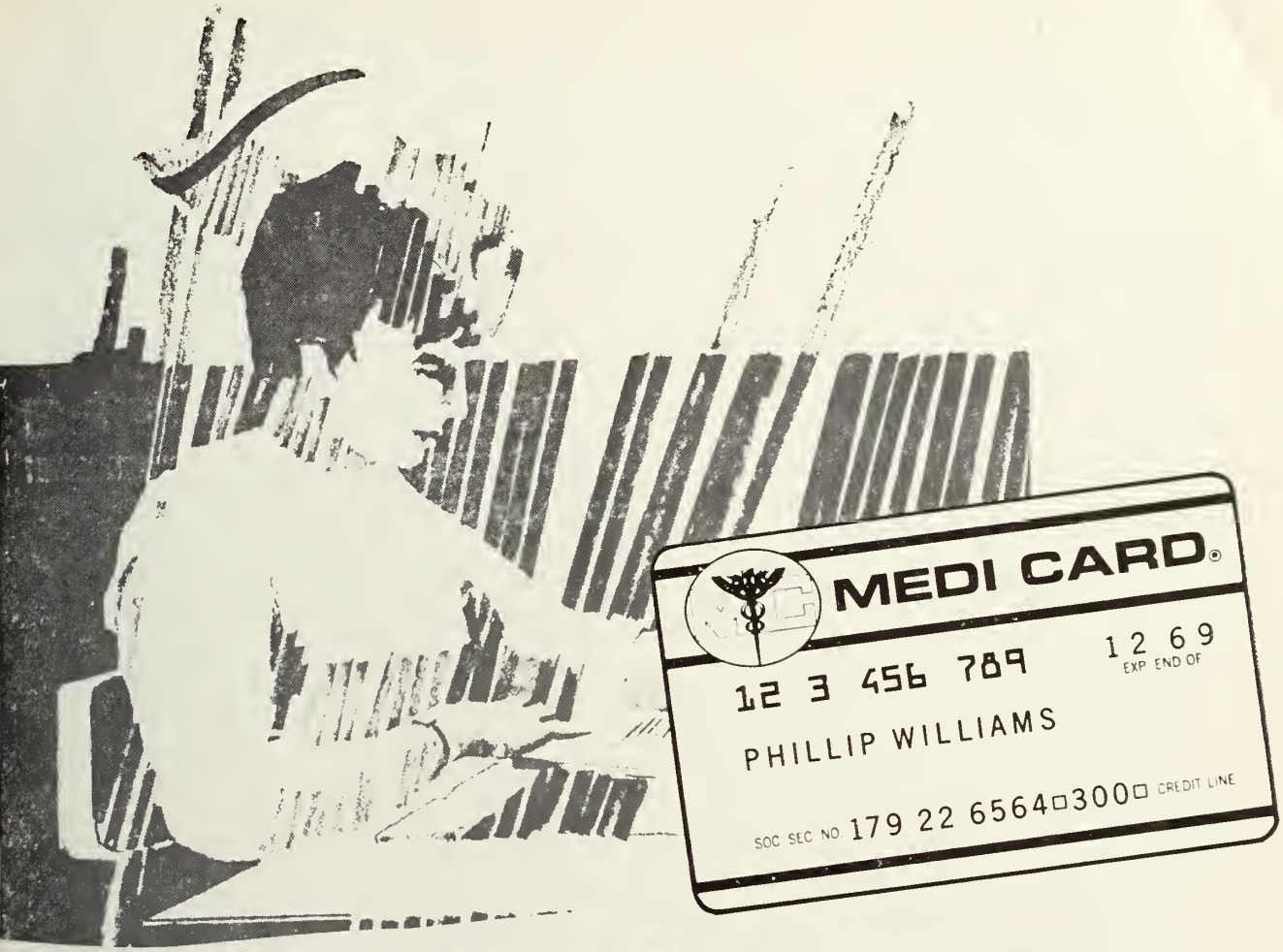
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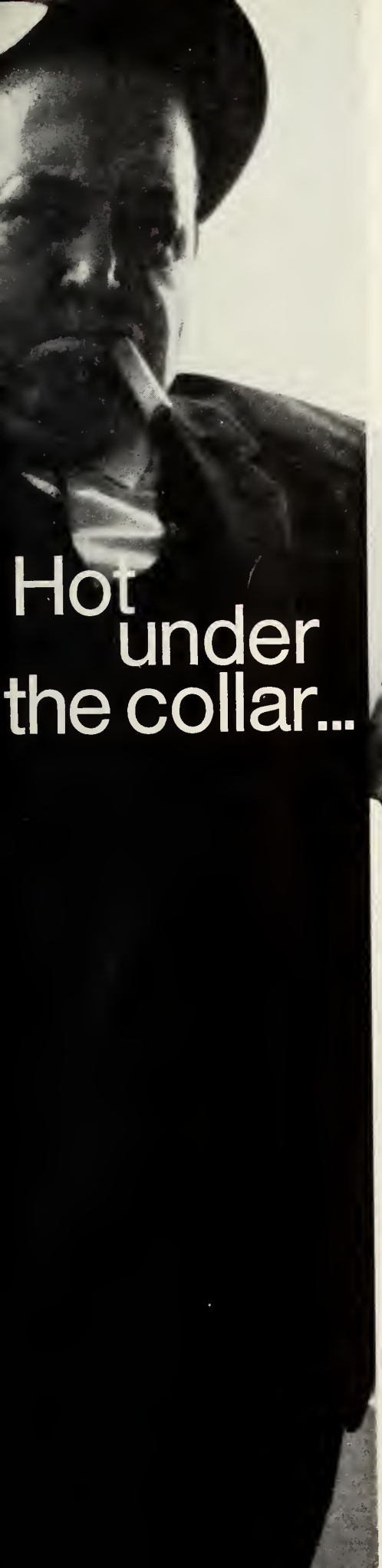
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and allay anxiety in hypertension.

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Use in pregnancy: Because chlorthalidone may cross the placental barrier and appear in cord blood and thiazides may appear in breast milk, this drug should be used with care in pregnant patients and nursing mothers. When used in women of childbearing age, the potential benefits of the drug should be weighed against the possible hazards to the fetus. Use of chlorthalidone may result in fetal or neonatal jaundice, thrombocytopenia, and possibly other adverse reactions which have occurred in the adult. Increased respiratory secretions, nasal congestion, cyanosis and anorexia may occur in infants born to reserpine-treated mothers.
Precautions: Antihypertensive therapy with this drug should always be initiated cautiously in postsympathectomy patients and in patients receiving ganglionic blocking agents, other potent antihypertensive drugs, or curare. Reduce dosage of concomitant antihypertensive agents by at least one-half. To avoid hypotension during surgery, discontinue therapy with this agent two weeks prior to elective surgical procedures. In emergency surgery, use, if needed, anticholinergic or adrenergic drugs or other supportive measures as indicated. Because of the possibility of progression of renal damage, periodic kidney function tests are indicated. Discontinue if the BUN rises or liver dysfunction is aggravated. Hepatic coma may be precipitated. Electrolyte imbalance, sodium and/or potassium depletion may occur. If potassium depletion should occur during therapy, the drug should be discontinued and potassium supplements given, provided the patient does not have marked oliguria.
Take particular care in cirrhosis or severe ischemic heart disease and in patients receiving corticosteroids, ACTH, or digitalis. Severe salt restriction is not recommended. Use cautiously in patients with ulcerative colitis or gallstones (biliary colic may be precipitated). Bronchial asthma may occur in susceptible patients.
Adverse Reactions: The drug is generally well tolerated. The most frequent side effects are nausea, gastric irritation, vomiting, diarrhea, constipation, muscle cramps, headache, dizziness and acute gout. Other potential side effects include angina pectoris, anxiety, depression, bradycardia and ectopic cardiac rhythms (especially when used with digitalis), drowsiness, dull sensorium, hyperglycemia and glycosuria, hyperuricemia, lassitude, restlessness, transient myopia, impotence or dysuria, orthostatic hypotension which may be potentiated when chlorthalidone is combined with alcohol, barbiturates or narcotics, leukopenia, aplastic anemia, skin rashes, thrombocytopenia, agranulocytosis, nasal stuffiness, increased gastric secretions, nightmare, purpura, urticaria, ecchymosis, weakness, uveitis, optic atrophy and glaucoma, and pruritus. Eruptions and/or flushing of the skin, a reversible paralysis agitans-like syndrome, blurred vision, conjunctival injection, increased susceptibility to colds, dyspnea, weight gain, decreased libido, dryness of the mouth, deafness, anorexia, and pancreatitis when epigastric pain or unexplained G.I. symptoms develop after prolonged administration. Jaundice, xanthopsia, paresthesia, photosensitization and necrotizing angiitis are possible.
Average Dosage: One tablet daily with breakfast.
Availability: Pink, single-scored tablets in bottles of 100 and 1000 (B)46-600-C
For details, please see complete prescribing information.

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Precautions: Until patient's response has been determined, he should be cautioned against engaging in operations requiring alertness. Administer with care to patients with cardiac or peripheral vascular diseases or hypertension.
Side Effects: Hypersensitivity reactions including skin rashes, urticaria, hypotension and thrombocytopenia, have been reported on rare occasions. Drowsiness, lassitude, nausea, giddiness, dryness of the mouth, mydriasis, increased irritability or excitement may be encountered.
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Supplied: Bottles of 100 and 500.

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In mild ulcerative colitis, a number of factors can precipitate an attack: for instance, dietary indiscretion, such as eating raw foods, or emotional overreaction, such as that aroused by financial difficulties. No matter what causes the patient's sensitive colon to "act up," he soon suffers from acute discomfort...and often, from anxiety and apprehension as well. Such patients frequently respond well to adjunctive dual-action Librax® therapy.

Librax combines, in a single convenient capsule, the well-known antianxiety effect of Librium® (chlordiazepoxide HCl) and the dependable anticholinergic/antispasmodic effect of Quarzan® (clidinium Br). Therefore, as Librax helps to relieve the patient's excessive anxiety and reduce his overreaction to stress, it also, at the same time, helps to control hypersecretion and hypermotility, thus relieving spasm and abdominal discomfort.

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Before prescribing, please consult complete product information, a summary of which follows.

INDICATIONS: Indicated as adjunctive therapy to control emotional and somatic factors in gastrointestinal disorders.

CONTRAINDICATIONS: Patients with glaucoma; prostatic hypertrophy and benign bladder neck obstruction; known hypersensitivity to chlordiazepoxide HCl and/or clidinium bromide.

WARNINGS: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering Librium (chlordiazepoxide hydrochloride) to known addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards. As with all anticholinergic drugs, an inhibiting effect on lactation may occur.

PRECAUTIONS: In elderly and debilitated, limit dosage to smallest effective amount to preclude development of ataxia, oversedation or confusion (not more than two capsules per day initially; increase gradually as needed and toler-

or here.



ated). Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (*e.g.*, excitement, stimulation and acute rage) have been reported in psychiatric patients. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

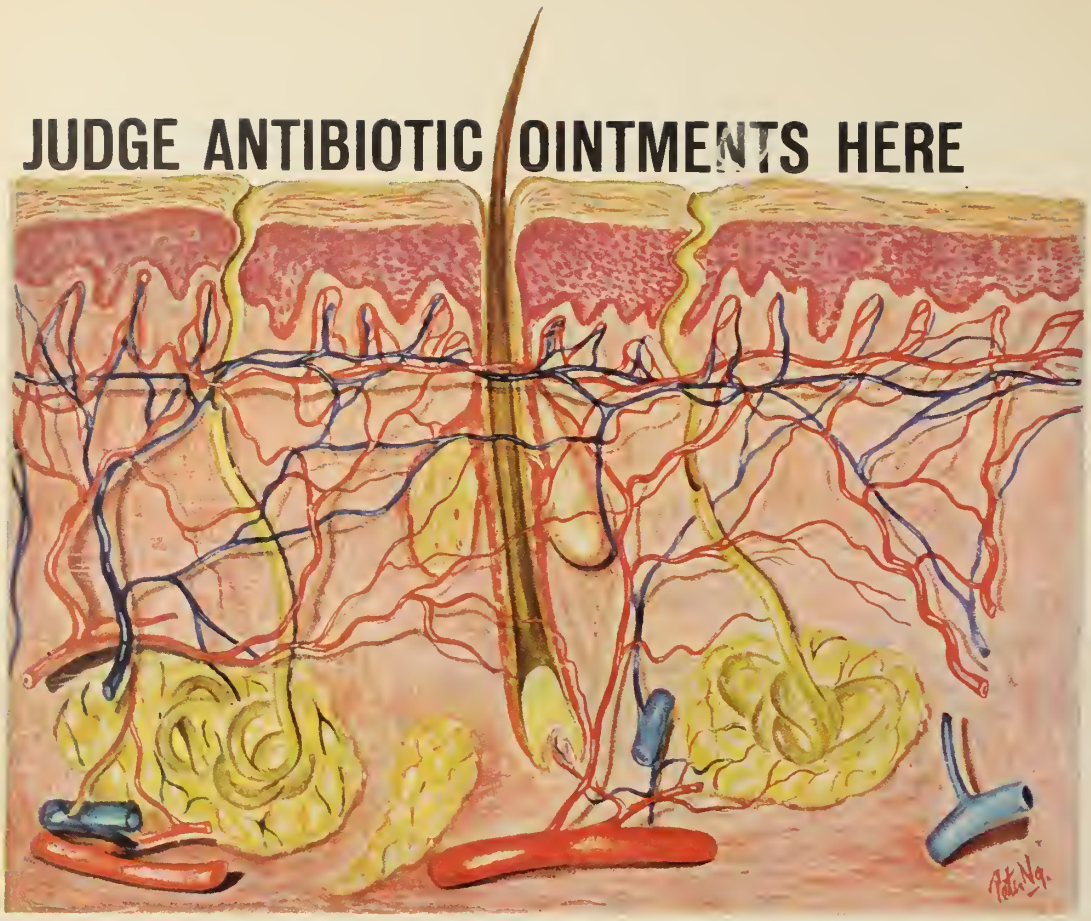
ADVERSE REACTIONS: No side effects or manifestations not seen with either compound alone have been reported with Librax. When chlordiazepoxide hydrochloride is used alone, drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally with chlordiazepoxide hydrochloride, making periodic blood counts and liver-function tests advisable during protracted therapy. Adverse effects reported with Librax are typical of anticholinergic agents, *i.e.*, dryness of mouth, blurring of vision, urinary hesitancy and constipation. Constipation has occurred most often when Librax therapy is combined with other spasmolytics and/or low residue diet.

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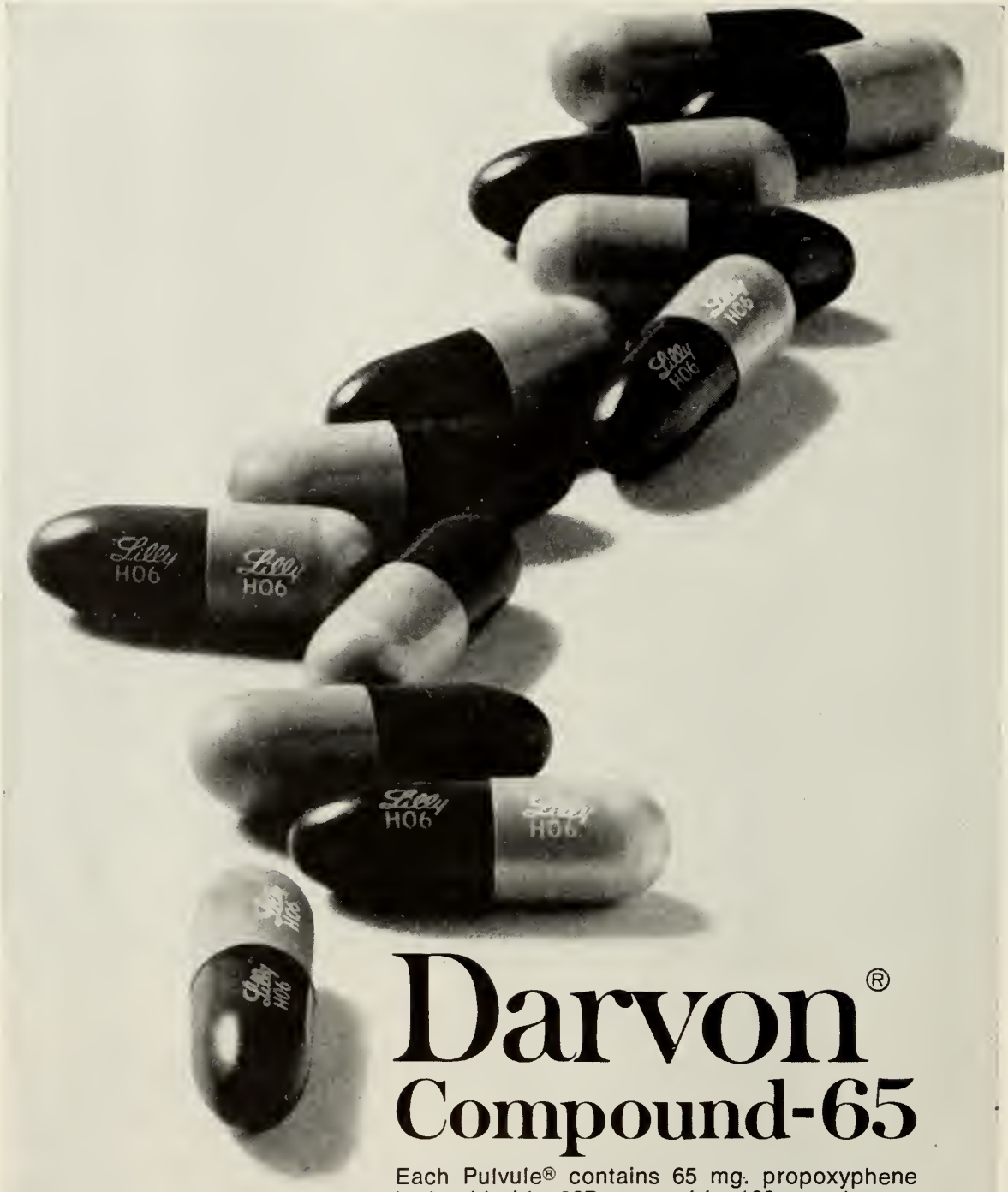
Pen•Vee® K is usually so rapidly and completely absorbed that therapeutic penicillin levels are attained within 15 to 30 minutes. Thus it can often obviate the need for penicillin injections. The higher serum levels produced generally last longer than with those of oral penicillin G.

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Contraindications: Infections caused by nonsusceptible organisms; history of penicillin sensitivity.
Warnings: Acute anaphylaxis (may prove fatal unless promptly controlled) is rare but more frequent in patients with previous penicillin sensitivity, bronchial asthma or other allergies. Resuscitative (epinephrine, aminophylline, pressor amines) and supportive (antihistamines, methylprednisolone sodium succinate) drugs should be readily available. Other rare hypersensitivity reactions include nephropathy, hemolytic anemia, leucopenia and thrombocytopenia. In suspected hypersensitivity, evaluation of renal and hematopoietic systems is recommended.
Precautions: In suspected staphylococcal infections, perform proper laboratory studies including sensitivity tests. If overgrowth of nonsusceptible organisms occurs (constant observation is essential), discontinue penicillin and take appropriate measures. Whenever allergic reactions occur, withdraw penicillin unless condition being treated is considered life threatening and amenable only to penicillin. Penicillin may delay or prevent appearance of primary syphilitic lesions. Gonorrhea patients suspected of concurrent syphilis should be tested serologically for at least 3 months. When lesions of primary syphilis are suspected, dark-field examination should precede use of penicillin. Treat beta-hemolytic streptococcal infections with full therapeutic dosage for at least 10 days to prevent rheumatic fever or glomerulonephritis. In staphylococcal infections, perform surgery as indicated.
Adverse Reactions: (Penicillin has significant index of sensitization): Skin rashes, ranging from maculopapular eruptions to exfoliative dermatitis; urticaria; serum sickness-like reactions, including chills, fever, edema, arthralgia and prostration. Severe and often fatal anaphylaxis has been reported (see "Warnings").
Composition: Tablets—125 mg. (200,000 units), 250 mg. (400,000 units), 500 mg. (800,000 units); Liquid—125 mg. (200,000 units) and 250 mg. (400,000 units) per 5 cc.

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The Journal
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VOLUME 60 APRIL, 1969 NUMBER 4

Rubinstein-Taybi Syndrome*

ERLINDA C. ROLDAN, M.D.**

Ever since Rubinstein and Taybi first mentioned in 1963 the new probable mental retardation syndrome – Broad Thumbs and Toes and Facial Abnormalities – many other reports followed suit. All of the original seven cases had a history of recurrent respiratory infections and showed mental, somatic, language and social retardation, broad thumbs and toes and varied peculiar features in the skull and face.[1]

To date, there is a total of 37 cases, gathered from the world literature, excluding the two cases which form the basis of this report. The accompanying list shows the authors, the year and the number of patients reported.

Rubinstein and Taybi, 1963	7
Coffin, 1964	6
Latuff, Yamin and Quintero, 1964	1
Job, Rossier and Grandprey, 1964	1
Jancar, 1965	1
Taybi and Rubinstein, 1965	6
Robinson, Miller, Cook and Tischler, 1966	2
Johnson, 1966	6
Kushnick, 1966	1
Berg, Smith, Ridler, Dutton, Green and Richards, 1966	6

The purpose of the present communication is to report 2 more cases similar to the 37 cases, from a mentally retarded population. These two patients, both males, presently reside at the Pineland Hospital and Training Center.

*From the Department of Research (Peter W. Bowman, M.D., Director) Pineland Hospital and Training Center, Pownal, Maine 04069.

**Formerly Director of Pediatric Service. Presently Associate Attending Pediatrician, The Brooklyn-Cumberland Medical Center, Brooklyn, N.Y. and Assistant Clinical Professor of Pediatrics, State University of N.Y. at Brooklyn. Present Address: 161 Ashland Place, Brooklyn, N.Y. 11201.

Description of the Cases

Case 1 – M.A., born 10-10-54, was second in order of birth. He was the product of a full term pregnancy. The mother who was 24 years old at the time had a weight gain of 30 pounds. Delivery was induced and effected by low forceps after a prolonged trial of labor. Birth weight was 6 pounds, 6½ ounces. The chin was allegedly caught in the maternal pelvis; the baby was cyanotic and had widespread edema. On the third day of life, he had atelectasis, necessitating placement in an incubator for two weeks. He was a feeding problem during infancy but there was no history of frequent respiratory infections. Physical and mental development were noted to be slow at an early age. He first sat up at 10 months of age, did not walk until the age of three, and has not learned to talk. Past diseases included mumps, chicken pox and peritonsillar abscess. Family history was non-contributory. The physical findings and results of laboratory tests are given in Table 1.

Case 2 – P.M., born 5-10-57, was fourth in order of birth. He was the product of a 10 month uncomplicated pregnancy except for the mother's edema of the ankles during the last month. The mother was 35 years of age at that time. Following a four hour labor, she had a normal spontaneous delivery. Birth weight was 7 pounds, 13 ounces. Neonatal course was uneventful. Development, both mental and physical was slow. He first smiled and raised his head at three months, sat alone at 1 year and 4 months; pulled himself up at the age of over two years. At the age of three years, he started to say a few words.

At three months of age he was in a car accident after which he started vomiting; he became a feeding problem for six months. At the age of 15 months he had partial thymectomy because of an enlarged thymus which extended to the upper lobe of the right lung. During the operation the presence of a persistent left superior vena cava was discovered. He was also found to have a left nasolacrimal duct stenosis. Past diseases included "measles" which occurred four times, German measles and pneumonia on two occasions. Except for otosclerosis in the father, family history was non-remarkable. Pertinent physical features and results of laboratory tests of these two cases, as well as those of the 37 reported cases in the literature are given in Table 1.

Discussion

The past 3 and one-half years have brought forth a number of reports on this new syndrome involving many

TABLE 1

Physical Findings

	Case 1 M.A.	Case 2 P.M.	Rub.-Taybi 7 cases	Coffin 6 cases	Latuff et al 1 case	Job et al 1 case	Jancar 1 case	Taybi-Rub. 6 cases	Kuschnick 1 case	Johnson 6 cases	Berg et al 6 cases	Robinson 2 cases
Height as Percentile	Below 3rd P	Below 3rd P	Bel.3rd P-4	Bel.3rd P-6	Below 25th P	Below 3rd P	Adult-N height	Bel.3rd P-6	Below 3rd P	Bel.3rd P-6	Bel.3rd P-1	Above 3rd P-2
Weight as Percentile	Below 3rd P	Below 3rd P	3rd P & bel.-3	3rd P-4		Below 3rd P	Adult-N weight	3rd P & bel.-4	50th P	Bel. 3rd P-5	Bel.3rd P-1	Above 3rd P-2
Head Circumference	Small for age	Small for age	Small-5	Small-6				Small-1		Small-6		Normal
Facial Features & Eye Defects												
Hypertelorism	Pos.	Pos.	Pos.-2			Pos.			Neg.	Pos.-2	Neg.-6	Neg.-2
Prominence in Forehead	Pos.	Pos.		Pos.-6		Pos.			Pos.		Neg.-6	Pos.-1
Beaked Nose	Pos.	Pos.	Pos.-5	Pos.-6	Pos.	Pos.	Pos.	Pos.-5	Pos.	Pos.-5	Pos.-5	Neg.-2
Elongated Nasal Septum	Pos.	Pos.	Neg.-7	Pos.-6					Pos.		Pos.-4	Neg.-2
*Abnormalities of the Ears	Pos.	Pos.	Pos.-4	Pos.-6		Pos.	Pos.		Pos.	Pos.-6	Pos.-3	
Lack of Maxillary Prom.	Pos.	Pos.	Neg.-7	Pos.-6			Neg.		Neg.			
Mandibular Recession	Neg.	Pos.	Neg.-7	Pos.-4		Pos.			Pos.			
**Dental Abnormalities	Pos.	Pos.	Pos.-2		Pos.		Pos.	Pos.-2	Neg.	Pos.-3		Pos.-1
High and Narrow Palate	Pos.	Pos.	Pos.-7	Pos.-6	Pos.	Pos.	Pos.	Pos.-6	Pos.	Pos.-6	Pos.-6	Pos.-1
Eye Defects												
Anti-Mongolian Slant	Pos.	Pos.	Pos.-5	Pos.-6	Pos.	Pos.		Pos.-6	Pos.	Pos.-6	Pos.-3	Pos.-1
Epicanthus	Neg.	Neg.	Pos.-2	Pos.-6				Pos.-2	Pos.	Pos.-4	Pos.-1	Pos.-1
Strabismus	Pos.	Pos.	Pos.-6	Pos.-6				Pos.-2	Pos.	Pos.-4	Pos.-1	Pos.-1
Error of Refraction	Neg.	Pos.	Pos.-5	Pos.-4		Pos.		Pos.-2	Neg.	Pos.in 2 tested	Neg.-6	Neg.-2
Extremities												
Broad Thumbs	Pos.	Pos.	Pos.-7	Pos.-6	Pos.	Pos.	Pos.	Pos.-6	Pos.	Pos.-6	Pos.-6	Pos.-2
Thumbs Unable to Oppose Fingers	Pos.	Pos.		Pos.-5						Pos.-1		Neg.-2
Simian Line	Pos.	Pos.	Pos.-3	Pos-3					Pos.	Pos.-6	Pos.-6	Pos.-2
Wide, Big Toes	Pos.	Pos.	Pos.-7	Pos.-6	Pos.	Pos.	Pos.	Pos.-6				
Pronated Feet	Pos.	Pos.	Pos.-1	Pos.-6								
Hyperextensible Joints	Pos.	Pos.	Pos.-2	Pos.-6		Pos.	Pos.			Pos.-1	Pos.-2	
Hypotonic Limbs	Pos.	Pos.	Pos.-3	Pos.-6		Pos.			Pos.			Pos.-1
Abnormal Gait	Pos.	Pos.	Pos.-7	Pos.-6		Pos.		Pos.-2				
Skeletal System												

	Case 1	Case 2	Rub.-Taybi	Coffin	Latuff et al	Job et al	Jancar	Taybi-Rub.	Kuschnick	Johnson	Berg et al	Robinson
***Vertebral Deformity	Pos.	Pos.	Pos.,-1	Pos.,-3							Pos.,-3	
##Chest Deformity	Pos.	Pos.	Pos.,-2	Pos.,-3				Pos.,-1		Pos.,-1	Pos.,-1	Neg.,-2
Cardiac Findings												
Lesion only	Neg.	Pos.	Pos.,-2	Pos.,-2				Pos.,-1		Pos.,-1	Pos.,-1	
Murmur only	Neg.		Pos.,-1	Pos.,-1						Pos.,-2		
Lesion and Murmur	Neg.											
Skin												
Freckles	Pos.	Pos.										
Hirsutism	Pos.	Pos.		Pos.,-5			Pos.		Pos.			
Hemangiomas	Neg.	Neg.	Pos.,-4	Pos.,-4		Pos.				Pos.,-5	Pos.,-2	
Genitalia												
Cryptorchidism	Pos.	Pos.	Pos.,-4M	Pos.,-3M		N.A.	Neg.	Pos.2M		Pos.,-2M	Pos.,-1M	Pos.,-M
Angulation of Penis	Pos.	Pos.		Pos.,-3M								
Speech Defect	Pos.	Pos.	Pos.,-5	Pos.-2 N,R,-4	Pos.	Pos.			Pos.,-1	Pos.,-1		
Hearing	Normal	Normal	Normal	Normal		Normal	Normal	Normal	Normal	Normal		Normal
Mentality	Ret.	Ret.	Ret.-5 BL---1	Ret.,-6	Ret.	Ret.	Ret.	Ret.-5 BL---1	Ret.	Ret.,-5	Ret.,-6	Ret.,-2
					Tests (X-Rays, EEG, EKG)							
X-Rays												
Skull												
Interorbital Distance	2.9 cm.	2.45 cm.										
Persistent Par. Foramen	Pos.	Pos.	Pos.,-1	Pos.,-1					Pos.,-1	Pos.-1	Neg.,-6	Pos.-1
Large Foramen Magnum			Pos.-4					Pos.-4 ?---2				Neg.-2
Prom. Digital Markings	Neg.	Pos.	Pos.,-2				Neg.-6	Neg.,-2			Neg.-6	Neg.-2
Maxillary Sinuses	Underde-veloped	Not de-veloped										
Frontal Sinuses	Deve-loped	Not de-veloped		Underde-veloped 3								
Thoracic Cage												
Sternal Abnormalities	Pos.	Pos.	Pos.,-2							Pos.-1	Pos.,-6	
Abnormalities of the Ribs	Pos.	Pos.	Neg.,-2								Neg.,-6	
Vertebrae												
Abnormalities not specified				Pos.,-3								
Widened Inter-pedicular S.	Pos.	Pos.	Neg.,-4					Pos.,-1				

	Case 1	Case 2	Rub.-Tavbi	Coffin	Latuff et al	Job et al	Jancar	Taybi-Rub.	Kuschnick	Johnson	Berg et al	Robinson
Failure of Neural Arch Clos.	Pos.	Pos.	Neg.-4							Pos.-1		
Extremities												
Retarded												NR-1
BonedAge	Pos.	Pos.	Pos.-7	Pos.-6	Pos.	Pos.		Pos.-6	Pos.	Pos.-6		Neg.-1
Spatulate												
Thumbs & B,T.	Pos.	Pos.	Pos.-7	Pos.-6	Pos.	Pos.	Pos.	Pos.-6	Pos.	Pos.-6	Pos.-6	Pos.-2
Abr.Development of Phalanges of Thumbs & Toes	Pos.	Pos.	Pos.-7	Pos.-6	Pos.	Pos.	Pos.	Pos.-6	Pos.			
EEG	Abn.	Abn.	Done in 5-Abn.			Slow for age Abn.		Done in 4;Abn.3	Abn.	Done in 4-Abn.		Abn.-1
EKG	Normal	IRBB	Abn.-1									

Routine urinalysis, aminoacids in urine and blood, hemoglobin, hematocrit, white blood cell count and differential, serum calcium, phosphorus, protein-bound iodine, buccal smear and chromosomal studies were normal in both cases

Table 1 (Continued)
Explanation of Abbreviations, Signs and Symbols

P . . . . . Percentile
Rub.. . . . . Rubinstein
Prom. . . . . Prominent
Pos.. . . . . Positive
Neg.. . . . . Negative
Blank space . Information not available
* . . . . . Includes abnormalities in size, shape and position
** . . . . . Includes crowded, deformed or absent teeth
*** . . . . . Either scoliosis, kyphosis or both
##. . . . . Pectus carinatum, excavatum or other minor anomalies of the sternum and ribs
NR. . . . . Not reported
M . . . . . Males
Par.. . . . . Parietal
Ret.. . . . . Retarded
BL . . . . . Borderline
Abn.. . . . . Abnormal
B.T.. . . . . Big toes
PVB,IRBBB . . Premature ventricular beats, incomplete right bundle branch block
S . . . . . Space
Clos. . . . . Closure

body systems but without a definite etiology. Recapitulated below are the observations gathered from the reports on the 37 cases.

Sex Incidence – Sex distribution is equal among the 37 cases.[2]

Age Range – The ages range from 5 months to 33 years.[2] The youngest patient was reported by Johnson.[3]

Family History – There were no consistent features in the family history of the 37 cases. However, worth mentioning are the two affected siblings in Johnson's series and one case of Rubinstein and Taybi and one of Johnson's who had relatives with broad thumbs but no other abnormalities.[1,3]

Except for otosclerosis in the father of one of our patients, the family history was noncontributory.

Personal History – No consistent pattern could be elicited in the gestational history of the reported cases, though some sort of "unusual events" were noted in most cases. The parental age, birth order and birth history did not seem to be significant.[1,2]

Several cases reported had trouble at or shortly after birth or during infancy. Coffin[4] described his cases to be "visibly abnormal at birth." One of his cases besides having a feeding problem and respiratory infections, had a history of frequent paronychia and epiphora. The latter was also present in one of Taybi and Rubinstein's cases who had congenital nasolacrimal duct obstruction. Nearly all cases had neonatal feeding problems, respiratory distress early in life and later on had recurrent respiratory infections. A history of allergy was noted in 5 cases originally described by Rubinstein and Taybi.[1]

Of Johnson's cases, with the exception of one, all were slow in developing both mentally and physically.[2,3] Almost all cases presented an IQ of below 50. Some were understature and exhibited retarded bone age.[2] Hearing was usually normal but speech was absent, delayed or defective.



Fig. 1a, Case 1. Taken at age 12½. Note the peculiar facies, narrow forehead, hypertelorism (confirmed by X-ray), slanting eyes, strabismus, large and prominent ears and freckles on the face.



Fig. 1b, Case 1. Note the elongated nasal septum and the prominent ears.

Both of our cases gave a history of feeding problems during infancy but only one had a history of several respiratory infections and epiphora resulting from a nasolacrimal duct stenosis. Neither one had frequent paronychia as mentioned by Coffin.[4] Both were slow in mental and somatic development from the very beginning. One has never learned to talk, though he could understand and comprehend. One of Rubinstein and Taybi's cases and Kushnick's only case had this type of language difficulty which the latter called "verbal aphasia."[1,8]

Striking features in these patients are the abnormalities in the head, face and extremities. The peculiarities of the head and face are varied and most of those reported in the 37 cases, are given in Table 1. Other findings which are present in a few cases but which are absent in our 2 cases and therefore not included in the table are as follows: large anterior fontanelle, septal deviation, broad nasal base, narrow nostrils, bifid uvula, micrognathia, eye defects such as asymmetrical or high arched eyebrows, ptosis, enophthalmos, anisocoria, corneal scar, megalocornea, speckling and heterochromia of the iris, lenticular opacities, coloboma of the iris, choroid and retina, nystagmus and optic atrophy.[1–10,12] High-arched palate is present in nearly all cases. It would be hard to attach much significance to this latter finding since it is commonly found in mentally retarded patients.

Broad thumbs and toes were noted in all cases. Berg et al consider this crucial in the diagnosis. Distal phalanges appear broad and short and in some, there is duplication of the proximal or distal phalanges of the first toe. Other findings noted randomly in the 37 cases but are not mentioned in the Table are short fifth fingers, syndactyly, polydactyly, clinodactyly, pes planus, clubfeet, genu and pes valgus.

Findings in the rest of the skeletal system are mentioned in Table 1. One case of Rubinstein and Taybi reported in 1965 had spina bifida with meningomyelocele.[5]

Cardiovascular system – Abnormalities of this system, either in the form of a heart murmur or a congenital defect, were noted in some cases. Three of Rubinstein and Taybi's original cases had heart murmurs but were dismissed later as functional. Subsequently, in 1965, the same authors reported one case who had a patent ductus arteriosus. One of Coffin's cases,[4] a six-year-old boy who died suddenly of fulminant enteritis was found at autopsy to have endocardial fibroelastosis. In Johnson's six cases, three had cardiac murmurs and two of these were proven to have patent ductus anteriosus. Another patient was found to have a double aortic arch at operation.[3] One case of Berg et al had an atrial septal defect.[2]

Our second case had a persistent left superior vena cava which was discovered at the age of five months during an operation for thymus enlargement. He also



Fig. 1c, Case 1. Note the spade-like hands with stubby fingers, broad thumbs and short fifth fingers which are slightly incurved.



Fig. 1d. Case 1. Shows the broad feet and spatulate great toes.

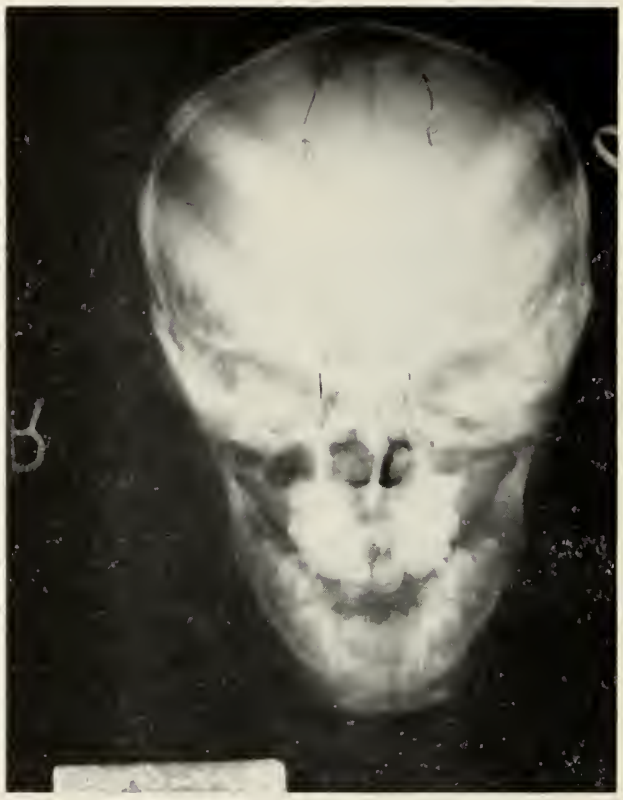


Fig. 1e, Case 1. AP view of the skull showing the persistent parietal foramina (indicated by arrows), deviated nasal septum and underdeveloped maxillary sinuses. The interorbital distance measures 2.9 cm.



Fig. 1f, Case 1. Note the short, broad terminal phalanges of the thumbs. The bone age is retarded (4 years compared to chronologic age of 10 years).

had incomplete right bundle branch block on EKG. There was no evidence of heart disease in the other patient.

Genito-Urinary System – Besides the findings mentioned in Table 1, other findings noted in this system were absence of a kidney, supernumerary kidneys, and nephrolithiasis.[5,4,7]

Skin and appendages – Our two cases showed abundant fine tufts of light hair on the trunk and limbs and freckles on the face and neck. The latter has not been mentioned previously. Widely spaced nipples and bilateral supernumerary nipples were reported in one patient by Robinson[10] and by Kushnick in his 10-year-old female patient.[8]

As noted above, the findings in the different areas of the body are numerous. There are, however, some features that are quite consistent and are present in nearly all cases; viz. – mental and physical retardation, broad thumbs and great toes, high-arched palate, ocular abnormalities of different types (strabismus, antimongolian slant of the palpebral fissures and error of refraction seem to be predominant); height, skeletal maturation and head circumference below average for age and incomplete or delayed testicular descent in males.

Biochemical and Cytologic Studies – Data from the



Fig. 1g, Case 1. Note the terminal phalanges of the great toe.

TABLE 2

DERMATOGLYPHIC PATTERNS

	Digital Pattern	*Ridge Count*	*Loop in 3rd Int.*	*atd angles*	*Thenar Pattern*	*Hallucal Pattern on Foot*
Case 1						
Right Hand	I II III IV V					
	U U R W U	102	+	55	0	L^t
Left Hand	V IV III II I					
	U W R U U	89	0	52	0	L^d
Total		191		102		
Case 2						
Right Hand	I II III IV V					
	U A A A A	14	+	37	0	L^d
Left Hand	V IV III II I					
	A A A A U	15	0	41	+	L^d
Total		29		78		

37 cases failed to reveal any constant chemical or cytologic abnormalities.[2] One of the reported cases of Rubinstein and Taybi showed generalized aminoaciduria, which however turned out to be absent when repeat determination was done 18 months later.

All the tests in our two cases were within normal limits.

Electroencephalogram – The EEG tracing is abnormal in several cases. Our two cases showed abnormalities in the EEG tracing consisting of high voltage, paroxysmal bursts at 4-5 per second in one patient and a nonfocal pattern consistent with interseizural activity in the other.

Dermatoglyphs – Robinson et al[10] reported a pattern he obtained in his two patients – an extensive pattern of the dermal ridges in the thenar/first interdigital (thenar/int. I) area. (loop carpal/whorl). Jancar found an unusual radial loop in the fourth digit of the right hand of his 22-year-old male patient. In 19 patients examined by Giroux & Miller, all exhibited extensive patterns in the thenar/int. I and hypothenar areas.[11] Berg and associates described several dermatoglyphic patterns in their six patients but considers the hallucal pattern containing two loops as possibly the most useful for diagnostic purposes. He suggested that the dermatoglyphs in this condition are a useful diagnostic aid but should be taken in relation to the other physical and mental findings.[2]



Fig. 2a, Case 2. Note the facial features, slanting eyes, elongated nasal septum, large, prominent ears and freckles on the face.

Table 2 shows the dermatoglyphic patterns of our two cases, based on the types described by Berg et al.[11]

Case 1 has very few of the features found in the syndrome. He has a high total ridge count (191). There are no thenar patterns and a loop tibial on the right foot.

Case 2 has more features characteristic of the syndrome. He has a very low total ridge count (29); a thenar pattern on the left hand and lateral displacement of the "f" triradius on both feet. Neither case showed an extra triradius on the tip of the thumb.

It is anticipated that some more cases will be reported from time to time and most likely they will be gathered from a retarded population. It is unfortunate that at the present time there are no special tests to confirm its presence.

Only one fatality has been reported so far – one of Coffin's. The cardiovascular findings at postmortem examination of this case were already mentioned earlier.



Fig. 2b, Case 2. Note the elongated nasal septum, receding chin and large ear.



Fig. 2c, Case 2. Shows the spade-like hands with broad thumbs and incurving of the right little finger.



Fig. 2d, Case 2. Shows the wide feet with slightly broad great toes.



Fig. 2e, Case 2. AP view of the skull showing prominent digital markings, under-developed frontal sinuses and slightly deviated nasal septum. There is a small parietal foramen on the left (indicated by arrow). The interorbital distance measures 2.45 cm.

The brain showed grossly a downward protrusion of the medial borders of the inferior surfaces of the frontal lobe; ill-defined superior temporal gyri and irregularity of the others; a reduced amount of central white matter; absence of the splenic portion of the corpus callosum and the presence of a cavum septi pellucidi. Microscopic



Fig. 2f, Case 2. Shows the short, broad terminal phalanges of the thumb. There is a deformity of the proximal phalanx of the thumb of the left hand producing an angulation deformity which is characteristic of the syndrome. The bone age is retarded (4 years compared to chronologic age of 9½ years).



Fig. 2g, Case 2. Shows the short, broad terminal phalanges of great toe.

examination showed increased depth of the cyto architecture of the cerebral cortex and poor differentiation of the layers and radial clumping of the small spindle-shaped and cytoplasm – poor neurons. The gross findings in the cerebral cortex were thought by Coffin to be related to the mental deficiency and not to the syndrome in its entirety.[4]

No definite causative factor could be detected from the data herein presented. No hereditary factor, abnormal events in utero, endocrinopathy or chromosomal aberration could be incriminated.[2] Despite the number of cases already reported, a number of things still remain unexplained, and several questions, besides that of etiology could be asked time and again-the incidence in the general population, the life expectancy of the patient and what help could be offered besides treating such a patient as a retardate.

Summary

Two cases of Rubinstein-Taybi Syndrome, also known as "Talpism" are presented.[4] Both patients are retarded, have the characteristic broad thumbs and big toes, peculiar facies and other abnormalities involving the head, face, limbs and other parts of the skeleton, the skin and the genitals, and have a height age and bone age below normal. No abnormal biochemical or cytologic tests were found in both patients, as was also true in the other cases reported previously. A review of the available literature is presented.

Synopsis – Abstract

Two cases of Rubinstein-Taybi Syndrome are presented. Both patients are retarded, have the characteristic broad thumbs and big toes, peculiar facies and other abnormalities involving the head, face and limbs and other parts of the skeleton, the skin and the genitals, and has a height age and bone age that are below normal. No abnormal biochemical or cytologic tests were observed in both patients, as was also true in the cases reported in the literature.

Acknowledgement

The author expresses her gratitude to Dr. Norma Ford Walker and associates, Department of Zoology, University of Toronto, Toronto, Ontario, Canada for the interpretation of the dermatoglyphic patterns.

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Klinefelter's Syndrome Variant, XXXX/XXXXY Mosaic †

ERWIN G. RERRICK, M.D.††

Cases of chromatin positive Klinefelter's syndrome are described with different sex chromosome complement. This paper presents pertinent data of an unusual mosaic variant – 48,XXXX/49,XXXXY.

CASE REPORT

This 8-year-old white boy was admitted to our institution in 1946. The family history is not remarkable and the ethnic origin is not available. The parents at the time of admission were alive, healthy and apparently normal. The patient, first child, was born at full term without complications. Birth weight: 2,508gm. The father's age was 30 and the mother's 24 at the time of birth, no consanguinity.

At the age of 2 the patient was found to be slow and at age 6 he attended school for about 10 weeks. He had to leave school because he was aggressive, attacked other children, destroyed pictures and broke toys. In addition he threw rocks and sticks at people walking by the house, for which he was taken to court and committed to our institution.

Physical examination (1946): Height 128cm., weight 24.5kg., head circumference 50cm. Small face and forehead. Left epicanthus. The mandible was somewhat protruding, the palate was high and arched. He had cold and clammy hands and feet. The elbow joints were deformed, the left shoulder lower than the right and the fingers slender. The lower extremities were long, the right foot rotated inward and unusual longness of the feet was noted. The external genitalia were infantile. Examinations of the neuromuscular system and motor functions revealed nothing of note.

In 1959 (age 21) the head circumference was 53cm. The small testes were in the scrotum. Testicular biopsy (excision) was performed without evaluation of the histological findings and the buccal mucosa smears for sex chromatin were interpreted by others as "male pattern."

In 1968 (age 30) the body length is 182.5cm., body weight 83kg and the head circumference 53cm. His voice is high pitched. The neck shows slight webbing, the thorax is flat and moderate gynecomastia is evident. The right sternoclavicular articulation is prominent. The left arm is 71 and the right 72.5cm. long. Pronation and supination is limited bilaterally. The pubic hair is scanty, no growth of hair in the axilla or on the face. The genitalia are underdeveloped, the penis is 5cm. long and the small testes, less than 2cm. in length, are in the small scrotum.

Since 1946 he has been admitted to our Hospital unit on repeated occasions because of bronchopneumonia and in 1952 because of pulmonary tuberculosis. By 1962 the tuberculosis was considered to be healed. In 1964 he sustained fracture of the right femoral neck. There was delayed healing and avascular necrosis of the femoral neck, requiring hip fusion.

Psychological evaluation:

1946	*SB-LM	MA: 4.1	IQ: 49
1954	*SB-LM	MA: 4.9	IQ: 32
1967	*SB-LM	MA: 4.4	IQ: 19
	**PPVT	MA: 3.8	IQ: 20



Fig. 1

Electroencephalogram: The tracing shows 11 per second alpha rhythm. There is a little low voltage 4 to 6 per second activity in the record. The main finding is, intermittent low voltage delta activity on the right side, persisting in most all montages. Photic stimulation is diagnostically negative. (G. L. Maltby, M.D.)

Electrocardiogram: Sinus rhythm, 70 per minute. PR interval 0.16; QRS interval 0.08. Axis: +60°. P waves: Low voltage and broad. QRS complexes: Normal. ST segment: Normal. T waves: Slightly blunted in chest and limb leads. Conclusion: Tracing within normal limits. (K. Apaydin, M.D.).

Radiological examination: The described findings are related to the present age (30 yrs.) of this patient. *Skull:* The pineal gland is visualized and the measurements reveal no displacement of the gland. The external occipital protuberance is prominent. The sinuses are well developed and well pneumatized. No intracranial calcification. The size of the sella turcica appears to be slightly smaller than the average. No evidence of bony erosion or bony destruction. *Chest:* There appear to be bilateral cervical ribs, but this may represent underdeveloped rudimentary first ribs. Lateral ridging of the body of the 6th dorsal vertebra, with resultant dextroscoliosis of the spine at that level, is noted. No other bone abnormalities. The heart is not enlarged and the lungs are clear. *Elbows:* There is elongation of the proximal end of the radius with dislocation posteriorly and laterally in relation to the capitellum (Fig. 1). The upper end of each ulna is club shaped on the AP view. *Pelvis:* The secondary ossification centers along the iliac crest and ischial tuberosity are still demonstrable. Coxa valga bilaterally and aseptic necrosis of the femoral head and neck on the left, due to old injury. *Hands:* Clinodactyly of the 5th finger bilaterally. Slender metacarpal and phalangeal bones (Fig. 2). *Knees and feet:* Marked club deformity of both feet. The bones of the feet and ankles do not reveal bony abnormality. (J. P. Konecki, M.D. and E. Schackow, M.D.).

Laboratory tests: Over the years, repeated hemograms and urine examinations were within normal limits. Blood sugar, BUN, uric acid, serum electrolytes, cholesterol and esters, were not abnormal. Serology negative. Urine and serum chromatography: Not remarkable. Blood group A, CDeMN positive, cEFy^{a}negative. The parents are now deceased and blood typing

† Part of this material was on exhibit at the Annual Meeting of the Maine Medical Association, Rockland, Maine, June 1968.

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* Stanford-Binet

** Peabody Picture Vocabulary Test



Fig. 2

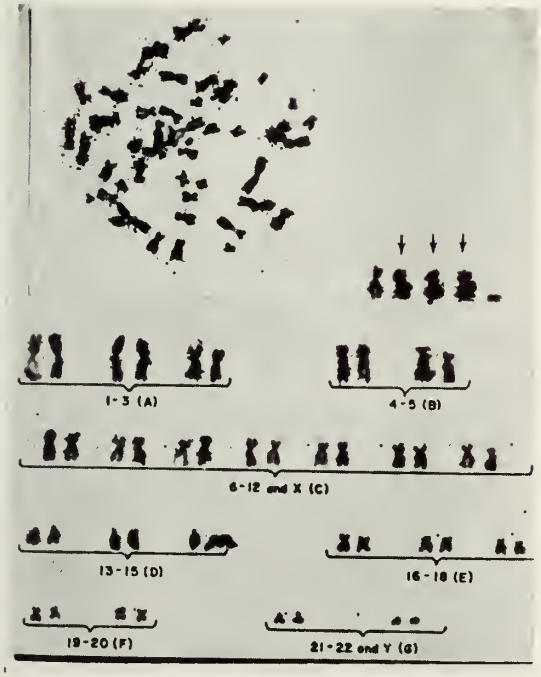


Fig. 3



Fig. 4

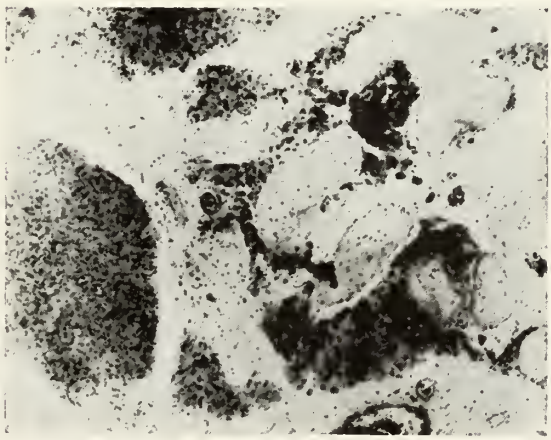


Fig. 5

for Xg^{a}antigen could not be performed. PBI: 3.5 micrograms. Thyroidautoantibodies: Negative. Total protein: 7.4gms.; A/G ratio: 1.3. Serum electrophoresis: Not unusual pattern. 17 ketosteroids (1959): 10mgs/24 hrs. Urinary gonadotropins: 81 IU/24 hrs. (Crooke method, normal 30-50 IU/24 hrs.).

Ketosteroids (1967): 4.3mgs/24 hrs. (normal male 10-20-mgs/24 hrs.) 17 ketogenic steroids: 2.6mgs/24 hrs. (male 4-16mgs/24 hrs.). 17 hydroxysteroids: 4.99mgs/24 hrs. (normal 2-10mgs/24 hrs.). Urinary gonadotropins: 45 HMGU/24 hrs. (adults 3-30 HMGU/24 hrs., Biochemical Procedures, North Hollywood, California).

Cytogenetic studies: Re-examination of the buccal mucosa smears prepared in 1959 revealed recognizable 1, 2 or 3 Barr (sex chromatin) bodies. Additional smears prepared recently show that 10% of the cells contain 3, 25% contain 2 and 31% single chromatin bodies, a total of 66% positive cells. The neutrophilic leucocytes were not examined for drumsticks.

Peripheral blood was taken for macro- and micro-cultures. From the spreads 67 metaphase plates were counted. Twenty-three plates contained 48, and 43 plates 49 and 1 plate 46 chromosomes. Seventeen microphotographs taken from each of the spreads with 48 and 49 chromosomes revealed 3 additional chromosomes, belonging to the C group. H_3 thymidine tagging in autoradiography studies shows them to be late replicating chromosomes (Fig. 3). This fact and the buccal mucosal findings are indicative that the structures are inactive X chromosomes in the sense of Lyon's hypothesis. A single skin culture was unsuccessful.

Histology of testis biopsy: The usual architecture of the testis is lost. Almost the entire parenchyma is replaced by loose fibrillary connective tissue forming faint whorl-like pattern (Fig. 4). The outline of occasional ghost tubules are only around islands of Leydig cells present (Fig. 5). The tubules have thick hyalinized walls and the lumens are obliterated by fine fibers. The Leydig cells form single or confluent islands, frequently with an adenomatous pattern (Fig. 6). Often the cells are large with hyperchromatic nuclei and many of the cells contain coarse or fine light brown pigment granules chiefly around the periphery of the cells. No crystalloids of Reinke are found. The elastica stain reveals no elastic membrane around the ghost tubules or in any part of the sections. The vessels have thick walls and are surrounded by concentric connective tissue fibers. It appears from the sections that the tubular development is focal and minimal and the generous random biopsy seems to reflect the true histological picture. The tunica albuginea is not remarkable and the epididymis shows nothing of note. Some of the Leydig cells contain two or three well defined, what appear to be, chromatin bodies along the nuclear membrane.

Finger and palm prints: There is a marked decrease of the total ridge count. Loops are present on the 5th finger of the

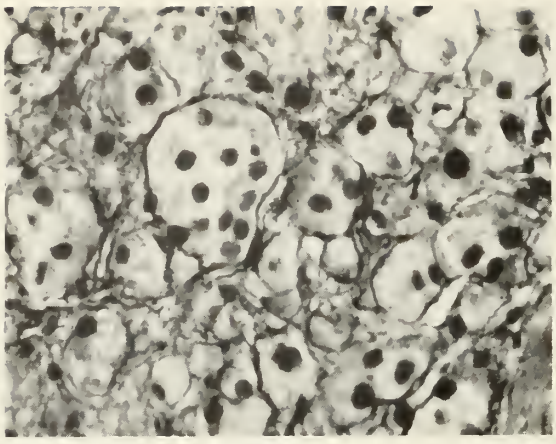


Fig. 6

Fig. 7 - Finger Print Pattern

Fingers	1	2	3	4	5	
Lt. Hand	0 A	0 A	0 A	0 A	3-0 LU	Total ridge count
Rt. Hand	0-14 LR	0 A	0 A	0 A	9-0 LU	26

*A = arches
*LU = loop, ulnal
*LR = loop, radial

left and on the 1st and 5th finger of the right hand. All the other fingers reveal only arches. The dominant arch pattern reduces the total ridge count to 26 (Fig. 7). In normal males the mean ridge count is around 150. The right palmar print reveals the absence of the right axial triradius, the thenar and hypothenar pattern and the d digital triradius is displaced radially to the interdigital area. On the left hand, hypothenar pattern is present and the atd angle is 44° (Fig. 8).

Comment

In 1942 Klinefelter, Reifenstein and Albright[1] recognized and described an entity, characterized by high urinary gonadotropins, gynecomastia, small testes, varying degrees of seminiferous tubular hyalinization without aleydigism. In 1955 Nelson[2] and in 1956 Plunkett et al,[3] Bradbury et al[4] Witschi et al,[5] and others found that patients with Klinefelter's syndrome have sex chromatin positive cells, similar to those found in normal females. Jacobs et al,[6] and Ford et al,[7] in 1959 discovered that sex chromatin positive males with Klinefelter's syndrome have an extra X chromosome, resulting in a 47,XXY karyotype. In the following years many cases with various karyotypes were reported. The most common being the XXY followed by mosaic XY/XXY and by the XXXXY karyotype. Other cases show almost all theoretically possible combination in the number of X chromosomes and morphological defects are also described. Cases with XXYY karyotype are on record.

Mental deficiency was noted in one of the patients reported by Klinefelter et al.[1] The early observations by Züblin[8] and in a larger series by Prader et al[9] suggested a relationship between mental deficiency and Klinefelter's syndrome. The findings apparently led many investigators to explore the incidents of sex chromatin positive Klinefelter's syndrome in mental institutions. Surveys involving more than 1,000 patients by Mosier et al,[10] Barr et al,[11] Maclean et al[12] and others revealed an average incidence of about 0.80%. de la Chapelle[13] found lower incidence (0.38%) in Finland, suggesting geographical variation as the reason. In newborns, positive sex chromatin was found in about 2/1,000 live male births by Moore[14] in 1959. Ferguson-Smith[15] studying the material of a male infertility clinic found that 8.5% of all cases of male subfertility and 30% of cases with major impairment are due to Klinefelter's syndrome. Hoaken et al[16] have summarized reported cases of Klinefelter's syndrome in which IQ values or data of estimated intelligence were available. The authors conclude that the observed mental deficiency in Klinefelter's syndrome tends to be mild to moderate and found indications that severe mental deficiency is associated with increasing numbers of X chromosomes.



Fig. 8

The possible seasonal variation and the incidence of Klinefelter's syndrome are dismissed in a recent study by Tünte et al.[17] Electroencephalogram anomalies in seven out of nine boys under 16 with Klinefelter's syndrome were noted by Prader et al.[9] Hambert et al[18] have investigated the EEG pattern of 45 men with Klinefelter's syndrome and found a significantly higher rate of abnormally low alpha frequencies, of low frequency dysrhythmia and of random activity. The control series consisted of men whose age came nearest to those of the patients. The comparison of the findings between the two groups reveals that 77% of the Klinefelter's syndrome group had abnormal records as opposed to 10% of the control subjects.

The radiographic findings of the classical Klinefelter's syndrome 47,XXY are not specific, except perhaps delayed bone maturation and long bones. Houston[19] has analyzed and summarized available x-ray findings of 28 reported cases with XXXXY chromosome complement. The elbows, wrists and hands showed some kind of anomaly in all patients, the most common being the wide proximal ulna (92%) and elongated distal ulna (89%). Incurving 5th finger and coxa valga was recorded in

84% of the cases. A variety of other changes were observed, such as radioulnar synostosis, dislocation of elbows, retarded bone age, thoracic kyphosis, etc.

Penrose[20,21] compiled the finger print pattern of cases with X chromosome anomaly. He found that the average values of the total ridge count on the fingers decreases with increasing numbers of X chromosomes. Whorls and loops are diminished and mostly arches are present, contributing low scores to the total ridge count. There are also changes in the thenar and hypothenar pattern, displacement of the axial triradius. The author also notes, that each supernumerary X chromosome reduces the ridge count by about 30 and the Y chromosome if more than 1 by about 12.

The histological changes in the testes become fully manifested at the time of puberty. There is progressing hyalinization of the tubules and altered spermatogenesis. There is oligospermia or complete absence of spermatogenesis. In the affected tubules the lumens are filled with Sertoli cells or by spindle shaped undifferentiated cells and no peritubular elastic membrane is present. The significance of the presence or absence of elastic membrane related to the time of tubular injury was shown by de la Balze et al.[22] The authors noted, that the elastic fibers became visible during the period of puberty and are absent in newborns. The absence ol elastic fibers in the Klinefelter's syndrome in the postpubertal testis suggests early damage, related to chromosomal anomaly. The Leydig cells show nodular or diffuse hyperplasia or nest like arrangement between the affected tubules. The Leydig cells appear physiologically and functionally disturbed. The histochemical changes were studied first by de la Balze et al[23] and extended by Hornstein,[24] who also has summarized in an extensive work the histology of the testis in Klinefelter's syndrome.

Histological changes seen in this syndrome may be also found in other forms of chromatin negative male hypogonadism. Search for sex chromatin, karyotyping, hormone assays in addition to testicular biopsy, will facilitate the correct diagnosis.

This patient presents all the characteristics of Klinefelter's syndrome variant with XXXXY chromosome complement. The second cell line with XXXX chromosomes had apparently little or not yet recognizable effect.

A similar case with XXXX/XX XXY chromosomes was reported by Stimson et al[25] in 1963, however, no data are available and Miller[26] mentions this case as having features of a XXXXY male.

Summary

A chromatin positive XXXX/XXXXY mosaic Klinefelter's syndrome variant is presented. The severely mentally retarded patient shows evidence of clinodactyly, subluxation of elbows and secondary ossification centers of the iliac and ischial tuberosity. The pituitary gonadotropins are elevated, the testis is almost structureless, with islands of hyperplastic Leydig cells surrounding few ghost tubules. The EEG reveals abnormal tracing. The total ridge count of the fingerprints is markedly decreased and the right axial triradius is absent.

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Group Psychotherapy Is Effective

NICHOLAS FISH, M.D. and BENJAMIN E. CHANDLER, JR., M.S.

INTRODUCTION

A review of the literature relating to the effectiveness of psychotherapy for children in child guidance clinics throughout the country shows treatment to be very satisfactory if controls are not used in the study. Morris, Soroker and Burruss reported that two-thirds of the former patients involved in their study showed satisfactory adjustment. In 1956, Cunningham, Westerman and Luchoff did a five-year follow-up on children treated at the Children's Center of Metropolitan Detroit. Sixty-three percent of these patients showed satisfactory adjustment, and the investigators stated that most of the patient's mothers attributed the improvement of their children to the Clinic treatment rather than to maturation. Duffy and Kraft found that male and female early adolescents could be successfully treated in mixed groups. They reported eighteen out of twenty patients showed improvement.

In studies where comparison groups were used this did not prove to be true. Kromer showed that fifty treated and fifty untreated children at the Tomkins County Mental Health Clinic showed no significant differences in the effects of treatment; but when asked their opinion of treatment, the mothers of the treated children felt their children had received more help from the Clinic than did those of the untreated children. In 1959, Levitt, Belser and Robertson reported a study of two groups who had contact with the Institute of Juvenile Research, an agency of the Department of Public Welfare for the State of Illinois. One group received treatment, the other did not, and no significant difference was found between the two groups. Recently, Allen E. Bergin concluded from a survey of psychotherapy research findings that psychotherapy causes clients to become better or worse adjusted than controls, although he agrees that psychotherapy offers no statistically proven superiority to no treatment at all. In a recent study in which controls were used, Pattison could find no significant evidence that group therapy was effective in the treatment of chronic mental patients.

In "The Effects of Psychotherapy" Hans Eysenck offers a strong argument against the efficacy of psychotherapy. His contention is that no recent study has presented convincing evidence of the value of the various forms of psychotherapy in treatment of emotional ills. This paper was discussed by several eminent psychiatrists, the consensus of opinion being that improper methods of study had been used in evaluating the effectiveness of psychotherapy, and that its actual usefulness could not be evaluated properly until a new method was employed. Investigators have tried to base effectiveness of treatment on subjective criteria, such as whether the patient felt better or worse since treatment. We used this criterion with the cases involved in this study and found 100% of the patients who had received treatment felt that they had been helped in some way by the Clinic, and 95% of those who had come only for diagnosis also felt that they had been helped. Such figures reflect the subjective feeling of the patients toward the Clinic and have little to do with the actual effectiveness of therapy. Other investigators have tried to evaluate the effectiveness of therapy on gross social changes, such as whether or not a patient was working, living on his own etc. Taylor claims to have found significant changes resulting from treatment and although the figures in his article are hard to follow, he does demonstrate that measures other than those of social change are apt to be more significant when one is trying to assess the effectiveness of psychotherapy.

Psychotherapy deals directly with a person's internal feelings, and these can be assessed only by a personal interview. Therefore, one must turn to such an interview in order to determine whether or not a person has been changed by psychotherapy.

In carrying on a discussion-type interview with children, it is necessary to resort to direct questions. This permits the interviewer to include some specific questions in the diagnostic session. The answers to these questions can be studied statistically and it is the author's contention that these answers can measure a child's ego strength and weakness as well as his super ego strength and weakness. If this is true, these questions will also measure the results of treatment. Such an interview was used in this study, and the purpose of the study is to prove this hypothesis.

CLINIC DESCRIPTION

Before going on with the methods and results of the study, a description of the Portland Child Guidance Clinic should be presented. The Clinic is a privately operated children's psychiatric clinic located in Portland, Maine. It is supported by the State, the local United Community Services, and an endowment fund, and fees obtained from patients.

The Clinic has been operating at a $5.00 per patient cost since its inception in January 1961. This is approximately one-third the national cost of similar clinics. There are three major reasons for the difference: (1) Association with another functioning psychiatric unit which enables the Clinic to use facilities at a somewhat reduced cost; (2) The use of an incentive pay basis rather than an annual pay schedule for the professional staff; (3) Extensive use of group therapy but not to the exclusion of individual therapy.

Continued on Page 95

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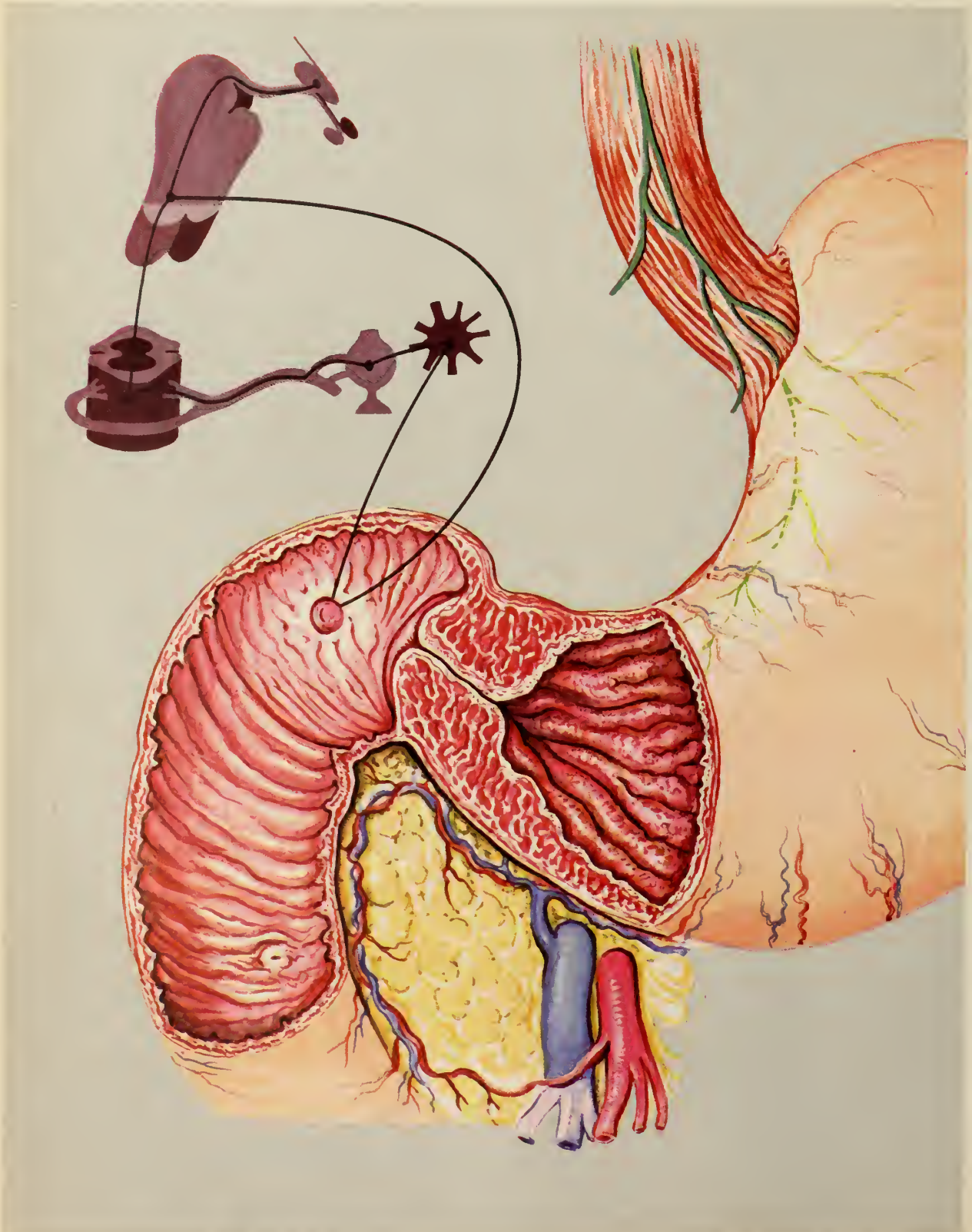
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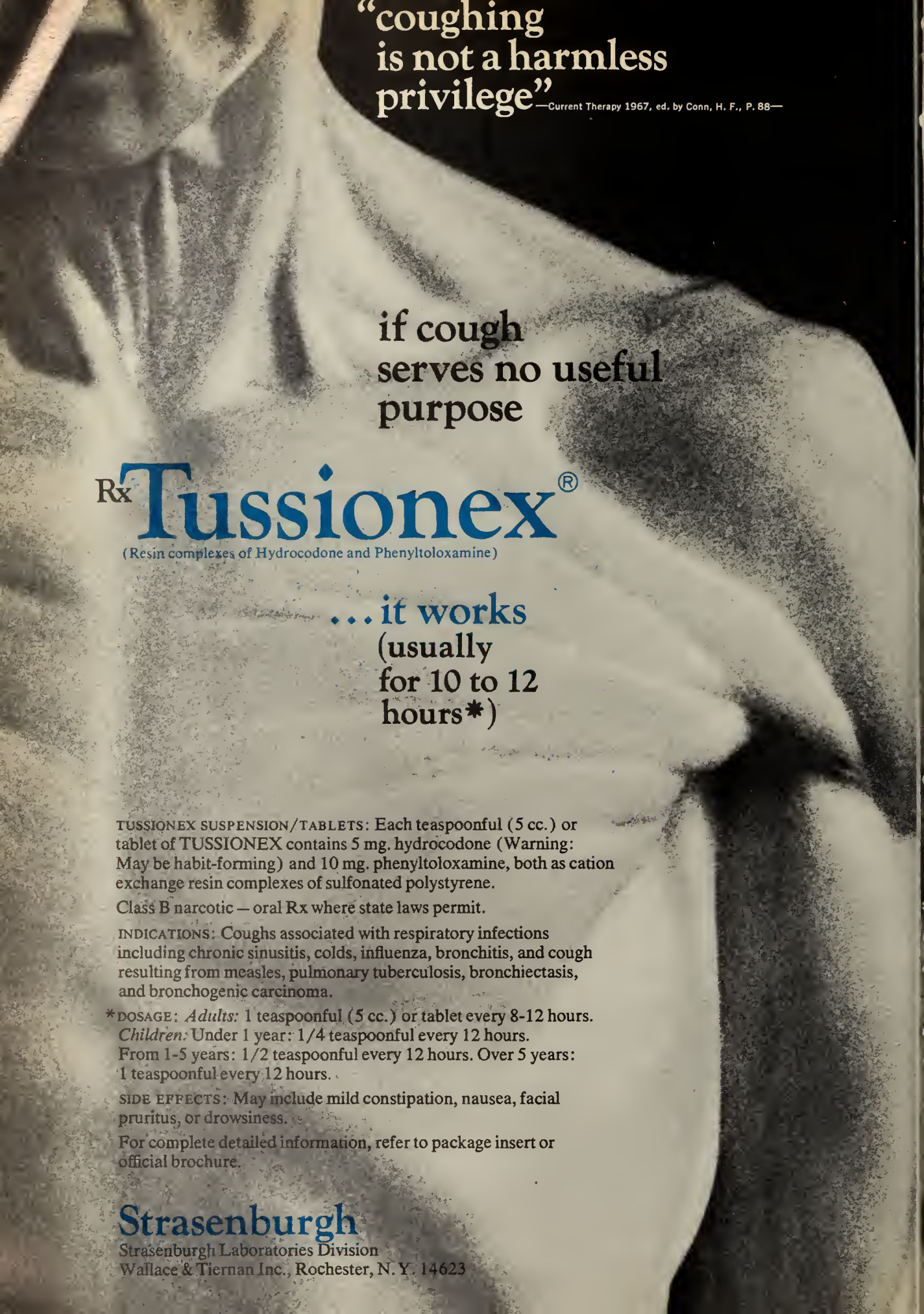
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The Clinic uses a modified form of analytic group therapy for parents and children. All persons entering a group are asked to sign an attendance contract, requesting that they attend at least five group sessions and give a two-week notice of discontinuance. Abreactive, constructive, and supportive types of play therapy are used on an individual basis. Occasional individual sessions are offered to adolescents and parents, but for the most part, children over nine years of age and parents are seen in groups. (As a result, only two children receiving individual treatment were used in this study.) There is an individual type of intake procedure, and re-evaluations are held individually every six months. A treatment plan is made at the time of intake and is reviewed at each re-evaluation. In general, the re-evaluation is a repetition of the intake procedure. Dictation is required only at the times of Intake and Re-evaluation. If it is recommended that a family starts in therapy, they continue until the next re-evaluation.

Intake Procedure

The routine diagnostic interview used in the Clinic for school age children is conducted in the following manner. The patient is met in the waiting room where introductions are made and he is invited into the inner office. During this introduction the patient's behavior is noted, his acceptance of the therapist, the ease with which he separated from his parents and any other behavior patterns observed as he enters the office, together with any obvious physical defects.

After we sit down, the child is asked if there is anything wrong. The usual response is a shrug of the shoulder or some other equally informative answer. He is then asked, "Why are you here?" This usually produces an unproductive response. If either of these questions should produce any information, the child is encouraged to express himself about the problem.

The therapist proceeds by asking if the child has ever seen a doctor. Who? Why? This is followed by the suggestion that one sees a doctor because one is sick and the doctor tries to make him well. After awaiting an affirmative answer, or some other response, the therapist explains, "I am a doctor, but I don't see people because they have colds or chickenpox or things like that." The patient is then given a description of what symptoms one expects in a patient who is seeing a psychiatrist. This usually results in a complete denial, although again, if a positive answer is obtained, it is followed up.

The child is then asked about his family. How many brothers and sisters, their age and sex, as well as their grade placement. He is then asked if mother works and what sort of work she does. What sort of work father does. Does he get along with his family, brothers, sisters, mother and father, and do they all get along well together? Any obvious leads are followed up.

The preceding part of the interview was not used in the follow-up interview.

The discussion then proceeds to the family relationships. "Do you have an allowance? How much? How often? Do you get additional money as gifts by asking for it? How often? How much? Do you earn money? Do you have chores to do at home? Do you mind doing them ? Do you try to get out of them? Are you successful? Do you sleep well? What time do you go to bed? Can you stay up later? Do you have any trouble eating? Are there foods you dislike?" The patients are then asked if there are any specific foods which they dislike. If there are more than two food dislikes, they are asked what happens when these are served at home. "Are they forced to eat? Do they feel nauseated?" Follow-up takes place if any pertinent material develops.

School is the next area discussed. "What school do you go to? What grade are you in? Have you repeated a grade? Do you like school? What grades did you get on your last report card?" The usual answer is "A's, B's and C's." Specific grades are then requested in each subject and are usually quite accurate when checked with the school records. "Have you ever had to see anyone other than your teacher for being in trouble at school?" 1 "Yes," then he is asked "Why" and "How many times?"

It is often convenient to go on and ask him about having been in trouble with the Police. This should be followed up in a like manner and then later, by the question, "Have you changed in any way? Are you afraid of something? Do you feel you have more or fewer of the same number of fears as others? Would you like to live by yourself if you could?" These last questions measure, at least in part, weakness of super ego.

One then moves on to friends. Do you have friends? The usual answer is "Yes." "Do your parents approve of your friends? If the answer is "NO," "Do you see them anyway? Can you give me the first names of a few of your friends?" A child should be able to name at least six friends if he is from 8 to 18 years of age, unless he lives in remote country. They should be about his own age and sex. "Which is your best friend? When did you last see your friends? Outside of School? What did you do with them? Do you like to be with people or by yourself? Do people understand you? Do people talk about you behind your back? Do people have it in for you? Are you different than other people? Do you daydream? Do you daydream in school? Do your daydreams seem real? Do you see things that are not there? Do things seem unreal to you?" These questions deal with ego weakness of a schizoid type. In regard to daydreaming the questions sometimes have to be modified because of the mental development of the child. Do you think to yourself? Similar modification for relative maturity may have to be considered on other items.

Questions are then continued that measure ego weakness of other than schizoid type. "Do you have aches and pains? Are you confused or mixed up? Do you sleep well? Do you tire easily? Do you get more tired doing something, or nothing? Are you rested when waking up in the morning? Are you more rested in the morning or in the evening? How is your appetite? Have

you lost any weight? Are your spirits good? Have you thought of suicide? Have you planned how you might do it?

These questions should be varied according to the child and followed up where indicated and maybe used to determine parental relationships, ego weakness or super ego weakness. Additional questions may be added to assess brain damage of developmental dyslexic nature.

Methods

Six hundred and sixty-six patients had been seen in the Portland Child Guidance Clinic from its inception in February 1961, to the start of the study in July, 1965. There were 154 boys and girls who had received enough treatment in the Clinic to be re-evaluated, and there were 412 boys and girls who had not. Forty boys and girls who had been considered either mentally defective or brain damaged by the Clinic team were excluded from the group. All children who were under the age of six years at the time of the experiment were also excluded. Two groups of 100 children were selected from both samples. This selection was done randomly. In order to prevent bias, Guilford's Technique of Stratified Random Sampling was used. The group of patients who had received enough treatment to be re-evaluated was considered the experimental group and the group who had not, was the control group.

Before attempting to interview all the boys and girls comprising the samples, it was decided to secure permission of the parents. A permission slip was devised and mailed to the parents of each child. Only 37 returns were received. Of these, twenty-six were in the experimental group and 11 from the control group. By means of telephone follow-up, it was possible to secure enough additional returns to have a final sample of 80 boys and girls, 40 in each group.

These groups were compared in respect to seven variables: race, sex, age, I.Q., number of siblings, position in family, time elapsed since last treatment or contact with the Clinic. Since all the children were caucasians and since both groups contained 24 boys and 16 girls, as a result of purposeful selection, it was not felt necessary to compare these items statistically. The other variables were compared and the comparison of these groups is represented in tabular form.

On the basis of this comparison, since no significant difference was found, it was concluded that the groups were similar and, therefore, of the same population.

After the two groups had been selected, telephone interviews were conducted with the children. All of them participated freely. A previously prepared questionnaire was used which was based on routine questions asked of each child during the process of the intake at the Clinic. These questions can be divided into several groups: (1) lead-up questions not included in the study; (2) questions calculated to measure ego strength; (3) questions calculated to measure parental consistency; (4) questions expected to measure super ego strength or weakness.

For the purpose of this study, lead-up questions and questions measuring both ego and super ego were not included. A few questions included in the questionnaire had to be excluded because information did not appear to be obtained in a manner similar to that used in the Clinic Intake. This was due to the fact that the person responsible for submitting the questionnaire had never worked in the Clinic. Some of the questions included in

	EXP. Before vs. Follow-up	*CONT. Before vs. Follow-up*	*BEFORE Exp. vs. Control*	*AFTER Exp. vs. Control*	*Over-all effect*
EGO STRENGTH					
Stays by self	+	0	0	0	+
Feels different	+	0	+	0	+
Do you sleep well	+	+	+	0	+
Daydream in school	0	0	0	0	0
Have aches and pains	0	—	0	0	—
Repetition of grades	+	0	0	+	+
D's and E's	+	0	0	+	+
Close contact with friends	+	0	0	+	+
Feels different than others	0	0	0	0	0
Do things seem unreal	+	—	0	+	+
Has seen two friends	+	—	0	+	+
Is able to name 6 friends	+	0	0	+	+
SUPER EGO					
Had to see Principal	0	0	0	—	—
Trouble with Police	0	0	0	—	—
PARENTAL CONTROL					
Has chores at home	0	—	0	0	—
Forced to eat	+	0	+	0	+
Has regular allowance	0	0	0	0	0
Dislikes more than 2 foods	0	0	0	+	+
Earns money outside home	+	—	0	0	0
Trouble eating	+	0	0	+	+
Gifts of money from parents	—	0	0	—	—
Vomit at table	0	+	+	0	+

	Control Group				*Experimental Group*					
	N	M	SD	SE_m	N	M	SD	SE_m	SE_{dm}	D_m	†
Age-months	40	166.5	37.30	6.05	40	153.2	35.65	5.71	8.32	8.3	1.00
IQ	40	95.4	14.61	2.34	40	94.7	15.66	2.51	3.43	0.7	0.20
No. Siblings	40	22.8	1.58	0.25	40	2.6	1.71	0.27	0.37	0.2	0.54
Pos. in Fam.	40	2.1	1.27	0.20	40	2.2	1.13	0.10	0.28	0.1	0.26
Time since last treated	40	24.2	12.75	2.04	40	22.8	12.27	1.97	2.83	1.4	0.49

the questionnaire were not asked sufficiently often in the Intake to offer a good comparison and were, therefore, excluded.

After obtaining a satisfactory list of responses, we returned to the intake records of the patients and made a comparison of the answers obtained from both the Experimental and Control groups before and after having been seen in the Clinic.

Statistics

X^2 studies were performed on twenty-one Independent variables. These can be grouped according to whether ego strength, super ego strength or parental control was being measured. They may be grouped as to whether statistically significant differences were obtainable in the items involved between the initial interview and the follow-up session, as well as significant differences between Experimental and Control groups.

Items believed to measure ego strength: If differences are significant, i.e. have X^2 of 3 or more in favor of ego strength, a plus is placed in the box. If no significant difference, a zero, and if significant difference toward ego weakness, a minus. The same procedure was used for super ego strength and weakness and satisfactory parental control. By using the cut-off of $X^2=3$ only 2 items were included whose significance was less than .05, and X^2 results as high as 35. were obtained.

From these comparisons one can conjecture if the Experimental Group had more of a particular item than the Control Group before treatment, that the pressure of this symptom leads parents to seek help for their children. If the Experimental and Control groups both show similar changes in a particular item, one can surmise that that particular type of behavior changes with age. If the change in the Experimental Group is greater than the change in the Control Group it may suggest that this change is due to treatment. The same inference may be made if the Experimental Group ends up in a significantly different position from the Control Group at the end of the treatment period.

Detailed Statistics

Items Measuring Ego Strength Or Weakness

There are two items in which three significant differences were recorded. The Experimental group improved during the period of study. The Control group showed a similar improvement, but to a lesser degree. At the time of follow-up the Experimental group was healthier than the Control group. This can be interpreted to mean that the process of maturing has a tendency to affect these items, as well as treatment.

Do Things Seem Unreal To You?

		Yes	*No*		
Experimental Group	Before	13	15	9.7	X^2 Exp. group between
	Follow-up	5	35		Before & Follow-up
Control Group	Before	17	9	4.7	X^2 Control grp. between
	Follow-up	15	25		Before & Follow-up
X^2 Before between Exp. and Control			<1		
X^2 Follow-up between Exp. and Control			6.6		

Have You Seen Two Of Your Friends During The Last Three Days?

		Yes	*No*		
Experimental Group	Before	7	26	35.2	X^2 Exp. group between
	Folow-up	36	4		Before & Follow-up
Control Group	Before	9	30	9.7	X^2 Control grp. between
	Follow-up	23	17		Before & Follow-up
X^2 Before between Exp. and Control			<1		
X^2 Follow-up between Exp. and Control			10.9		

There are four items in which two significant differences were recorded. The Experimental group improved during the period of study and at the time of follow-up the Experimental group was healthier than the Control group. In this case all the changes suggest that treatment is effective.

Grade Repeated Before Treatment As Compared To Grades Repeated After Treatment

		Yes	*No*		
Experimental Group	Before	17	14	9.3	X^2 Exp. group between
	Follow-up	8	32		Before & Follow-up
Control Group	Before	18	19	<1	X^2 Control grp. between
	Follow-up	17	23		Before & Follow-up
X^2 Before between Exp. and Control			<1		
X^2 Follow-up between Exp. and Control			4.7		

DID YOU HAVE ONE E OR TWO D'S ON YOUR LAST REPORT CARD?

		Yes	*No*		
Experimental Group	Before	22	5	12.6	X^2 Exp. group between
	Follow-up	15	25		Before & Follow-up
Control Group	Before	23	12	<1	X^2 Control grp. between
	Follow-up	26	14		Before & Follow-up
X^2 Before between Exp. and Control			1.9		
X^2 Follow-up between Exp. and Control			6.0		

PATIENTS FOUND TO HAVE HAD CLOSE CONTACT WITH AT LEAST 2 FRIENDS IN LAST 3 DAYS

		Yes	*No*		
Experimental Group	Before	10	20	22.0	X^2 Exp. grp. between
	Follow-up	35	5		Before & Follow-up
Control Group	Before	21	18	<1	X^2 Control grp. between
	Follow-up	20	20		Before & Follow-up
X^2 Before between Exp. and Control			2.9		
X^2 Follow-up between Exp. and Control			13.1		

ABLE TO NAME 6 FRIENDS

		Yes	*No*		
Experimental Group	Before	15	21	6.2	X^2 Exp. group between
	Follow-up	28	12		Before & Follow-up
Control Group	Before	12	26	<1	X^2 Control grp. between
	Follow-up	17	23		Before & Follow-up
X^2 Before between Exp. and Control			<1		
X^2 Follow-up between Exp. and Control			6.1		

There was one item in which one significant difference was recorded. The Control group improved during the period of study. This would suggest that treatment was detrimental.

DO YOU HAVE ACHES AND PAINS?

		Yes	*No*		
Experimental Group	Before	13	17	1.9	X^2 Exp. grp. between
	Follow-up	11	39		Before & Follow-up
Control Group	Before	15	17	8.7	X^2 Control grp. between
	Follow-up	6	34		Before & Follow-up
X^2 Before between Exp. and Control			<1		
X^2 Follow-up between Exp. and Control			1.9		

There are two items that show no statistically significant change in any way.

DO YOU DAYDREAM IN SCHOOL?

		Yes	*No*
Experimental Group	Before	13	18
	Follow-up	20	20
Control Group	Before	15	20
	Follow-up	18	22

DO YOU FEEL DIFFERENT FROM OTHER PEOPLE?

		Yes	*No*		
Experimental Group	Before	16	15	1.8	X^2 Exp. grp. between
	Follow-up	13	23		Before & Follow-up
Control Group	Before	12	28	1.3	X^2 Control grp. between
	Follow-up	17	23		Before & Follow-up
X^2 Before between Exp. and Control			2.8		
X^2 Follow-up between Exp. and Control			<1		

There was one item in which three significant differences were recorded. The Experimental group appears to have been less healthy before treatment. The Experimental group improved during the period of study, and at the time of follow-up the Experimental group was healthier than the Control group. This would suggest that this symptom, when present, had a tendency to force people into treatment and that it was susceptible to treatment.

DO YOU SLEEP WELL?

		Yes	*No*		
Experimental Group	Before	12	15	21.4	X^2 Exp. group between
	Follow-up	38	2		Before & Follow-up

Control Group	Before	22	6	<1	X^2 Control grp. between
	Follow-up	30	10		Before & Follow-up
X^2 Before between Exp. and Control			6.8		
X^2 Follow-up between Exp. and Control			6.2		

There was one item in which one significant difference was noted. The Experimental group appeared to have been less healthy before treatment. This again suggests that the presence of this symptom had a tendency to force people into treatment and was in itself susceptible to treatment.

WOULD YOU RATHER BE BY YOURSELF, OR WITH PEOPLE?

		Yes	*No*		
Experimental Group	Before	12	12	9.1	X^2 Exp. grp. between
	Follow-up	6	34		Before & Follow-up
Control Group	Before	9	23	<1	X^2 Control grp. between
	Follow-up	11	29		Before & Follow-up
X^2 Before between Exp. and Control			2.8		
X^2 Follow-up between Exp. and Control			1.9		

ITEMS MEASURING SUPER EGO STRENGTH AND WEAKNESS

There were two items related to weakness of super ego. Both of these showed one significant difference, namely, that the Experimental group was worse off than the Control group at the time of follow-up. This would suggest that psychotherapy worsens weakness of super ego.

SEES PRINCIPAL BECAUSE OF BEING IN TROUBLE IN SCHOOL

		Yes	*No*		
Experimental Group	Before	5	23	<1	X^2 Exp. grp. between
	Follow-up	9	23		Before & Follow-up
Control Group	Before	5	35	<1	X^2 Control grp. between
	Follow-up	4	36		Before & Follow-up
X^2 Before between Exp. and Control			<1		
X^2 Follow-up between Exp. and Control			3.9		

IS IN TROUBLE WITH THE POLICE

		Yes	*No*		
Experimental Group	Before	12	21	<1	X^2 Exp. grp. between
	Follow-up	14	24		Before & Follow-up
Control Group	Before	8	32	<1	X^2 Control grp. between
	Follow-up	7	33		Before & Follow-up
X^2 Before between Exp. and Control			2.4		
X^2 Follow-up between Exp. and Control			3.9		

ITEMS MEASURING PARENTAL CONTROL

There is one item in which two significant differences were recorded. The Experimental group improved during the period of study and at the time of follow-up the Experimental group was healthier than the Control group. In this case all the changes suggest that treatment is effective.

DO YOU HAVE TROUBLE EATING?

		Yes	*No*		
Experimental Group	Before	10	20	12.3	X^2 Exp. grp. between
	Follow-up	1	39		Before & Follow-up
Control Group	Before	9	24	1.7	X^2 Control grp. between
	Follow-up	6	34		Before & Follow-up
X^2 Before between Exp. and Control			<1		
X^2 Follow-up between Exp. and Control			3.8		

There is one item in which two significant differences were recorded. The Experimental group worsened during the period of study and at the time of follow-up the Control group was healthier than the Experimental group.

DO YOUR PARENTS GIVE YOU MONEY WHEN YOU ASK FOR IT?

		Yes	*No*		
Experimental Group	Before	16	12	6.6	X^2 Exp. grp. between
	Follow-up	34	6		Before & Follow-up

Control Group	Before	17	16	2.0	X^2 Control grp. between
	Follow-up	27	13		Before & Follow-up
X^2 Before between Exp. and Control		<1			
X^2 Follow-up between Exp. and Control		3.4			

There is one item in which two significant differences were recorded. Both the Control and Experimental groups improved during the period of study. This would suggest that maturation had a tendency to produce a healthier situation.

DO YOU EARN MONEY OUTSIDE THE HOUSE?

		Yes	*No*		
Experimental Group	Before	7	21	18.4	X^2 Exp. grp. between
	Follow-up	31	9		Before & Follow-up
Control Group	Before	14	17	12.7	X^2 Control grp. between
	Follow-up	23	17		Before & Follow-up
X^2 Before between Exp. and Control		2.8			
X^2 Follow-up between Exp. and Control		<1			

There is one item in which one significant difference was noted. At follow-up the Experimental group was healthier than the Control group.

DO YOU DISLIKE MORE THAN TWO FOODS?

		Yes	*No*		
Experimental Group	Before	13	14	<1	X^2 Exp. grp. between
	Follow-up	15	25		Before & Follow-up
Control Group	Before	17	11	<1	X^2 Control grp. between
	Follow-up	23	17		Before & Follow-up
X^2 Before between Exp. and Control		<1			
X^2 Follow-up between Exp. and Control		3.2			

One item showed no statistically significant difference.

DO YOU HAVE A REGULAR ALLOWANCE?

		Yes	*No*
Experimental Group	Before	9	24
	Follow-up	16	24
Control Group	Before	11	25
	Follow-up	19	21

There is one item in which one significant difference was recorded. The Control group improved during the period of study.

DO YOU HAVE CHORES TO DO AT HOME?

		Yes	*No*		
Experimental Group	Before	25	6	1.3	X^2 Exp. grp. between
	Follow-up	36	4		Before & Follow-up
Control Group	Before	19	6	7.4	X^2 Control grp. between
	Follow-up	39	1		Before & Follow-up
X^2 Before between Exp. and Control		<1			
X^2 Follow-up between Exp. and Control		<1			

There was one item in which two significant differences were noted. The Experimental group appeared to have been less healthy before treatment and the Experimental group improved during the period of study. This would suggest that the presence of the symptom tends to force people into treatment and was in itself susceptible to treatment.

ARE YOU FORCED TO EAT BY YOUR PARENTS?

		Yes	*No*		
Experimental Group	Before	12	14	7.7	X^2 Exp. grp. between
	Follow-up	6	34		Before & Follow-up
Control Group	Before	7	27	<1	X^2 Control grp. between
	Follow-up	8	32		Before & Follow-up
X^2 Before between Exp. and Control		7.7			
X^2 Follow-up between Exp. and Control		<1			

There is one item in which two significant differences were recorded. The Control group worsened during the period of study, and the Experimental group appeared to be less healthy before treatment.

DO YOU VOMIT AT TABLE?

		Yes	*No*		
Experimental Group	Before	3	22	<1	X^2 Exp .grp. between
	Follow-up	6	34		Before & Follow-up
Control Group	Before	0	34	5.5	X^2 Control grp. between
	Follow-up	6	34		Before & Follow-up

X^2 Before between Exp. and Control 4.3
X^2 Follow-up between Exp. and Control 0

SUMMARY

This study was undertaken by an objective observer not connected with the Clinic Staff.

It was found that symptoms of ego weakness are improved by psychotherapy, and symptoms of super ego weakness worsen slightly by psychotherapy.

Changes in parental handling seem to show equivocal changes in the direction concluded to be improvement by the Clinic Staff.

The findings also suggest that schizoid symptoms, having a desire to be by oneself and lack of sleep on the part of the child, tend to force the parents to seek treatment for their children.

It also seemed to be true that parents who force their children to eat are more apt to bring their children in for treatment.

As children mature their ability to earn money increases, things seem to be more real to them, and they have a more active type of relationship with their peers.

It is also felt that the findings of the study show definite, favorable effects of the use of group psychotherapy in a children's out-patient clinic.

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Dr. Fish, 50 Moody St., Saco, Maine 04072
Dr. Chandler, 80 Mabel St., Portland, Maine 04103

These are the dates —

JUNE 15, 16, 17

for the 1969 M.M.A. Annual Session,

The Samoset, Rockland, Maine

RESERVE THESE DATES NOW

X-Ray Of The Month – No. 4*

History

This 21-year-old Vietnamese girl was 17 weeks pregnant when first seen in Pre-Natal Clinic and found to be hypertensive. There was a previous history of a stroke, and on physical examination a decrease in the systolic pressure was found between the arms and legs. A retrograde catheter aortogram was done.



Diagnosis: Takayasu's Arteriopathy

There has been a great deal written recently about this entity under a variety of different titles: pulseless disease, young female arteritis, primary arteritis of the aortic arch, brachiocephalic arteritis, idiopathic panarteritis, and many others. The disease occurs mainly in young people of both sexes and adult women in non-Western populations but rarely in adult males.

The disease involves large elastic arteries in a diffuse or patchy fashion with destruction of elastic tissue and associated intimal proliferation and adventitial inflammatory cell infiltration. The etiology is conjectured to be an abnormal auto-immune process and may begin with occlusion of the vasa vasorum. The media then weakens and dilates, and if the interna also weakens, a saccular aneurysm forms. Thrombosis leads to vessel narrowing and occlusion. Organized thrombus may be incorporated into the vessel wall and become calcified. The lesions often occur at sites of flow turbulence (i.e. beyond origins of left subclavian or renal arteries).

Aortography shows changes similar to those of severe atherosclerosis but the age and sex distribution of the patients should make this differentiation easy. This pa-

Continued on Page 108

*From the Department of Radiology, Maine Medical Center, Portland, Maine 04102.

These are the dates for you to relax scientifically . . .

UNE

15

16

17













at THE SAMOSET, Rockland, Maine







The Program

for the 1969 Annual Session includes . . . .

SCIENTIFIC SESSION SPEAKERS–

- Friend of Boston — "Useless Drugs, Preparations and Prescription Fallacies of Physicians"
- Egdahl of Boston — "Adrenal Hypertension"
- Alpert of Boston — "Acute Childhood Poisoning: Why the Fuss?"
- Gil of Waltham — "Demographic and Social Aspects of Persons Involved in Child Abuse"
- Sussman of Philadelphia — "Pathology of the Battered Child and the Responsibility and Role of the Physician"
- Little of Hartford — "The Secret to Lowering Surgical Morbidity and Mortality"
- Magraw of Washington — "Medicine and Society — Retrospect and Prospect"
- Hirata of New Haven — "Sports Medicine"
- Hall of Princeton — "Family Doctor on the Sidelines"
- Reed and Delabarre of Boston — "Cardiac Rehabilitation"
- Weiss of Hanover — "Psychotherapy"

SPECIALTY GROUP SPEAKERS–

- Little of Hartford — "Halothane"
- Shapiro of New Haven —"The Biochemical Basis of Metabolic Bone Disease"
- Lord of Portland — "Recent Advances in Pulmonary Physiology"
- Alexander of New York — "Pulmonary Infections and Other Dangers Inherent in the Use of Mechanical Ventilators"

Watch your mail for . . . .

PROGRAM DETAILS

SPECIALTY GROUP PROGRAMS

RESERVATION FORMS

The Woman's Auxiliary

to the Maine Medical Association will be holding their Twentieth Annual Convention in conjunction with the 1969 annual session of the Maine Medical Association. The program for their group will be included in the M.M.A. program.

DEAN H. FISHER, M.D.
COMMISSIONER

State Of Maine

Department of Health and Welfare

Mental Health Resources Directory – Part II

JOHN B. LEET*

This is Part II of the article which appeared in the March, 1969 issue of the Maine Medical Journal having to do with mental health resources here in the State of Maine. Part I described briefly the resources available primarily in the central and northeastern part of the State whereas this article has to do with mental health facilities and services in the southwestern part of the State.

The Bureau of Mental Health has recently distributed a Brief on mental health resources. However, it was felt that the information in this article would be extremely helpful to physicians in Maine who wish to make referrals to mental health services within their respective areas. Hopefully, this has provided a public service.

MENTAL HEALTH CENTER AREA IV

Counties served: Franklin, Oxford, Androscoggin. *Sponsoring organization:* Child and Family Mental Health Services. *Title of Facility or Service:* Child and Family Mental Health Center. *Address:* 106 Campus Avenue, Lewiston, Maine, 04240. *Telephone:* 783-8523. *Statement of Purpose:* To provide comprehensive community mental health services to Franklin, Oxford and Androscoggin Counties. *Admission procedure:* A person may be referred by self or another for service, may call or write for an appointment or in the event of a daytime emergency, may come to the center. *Clientele served:* Residents of Androscoggin County; residents of Oxford and Franklin Counties at the request of the Satellite Clinics (Oxford County Mental Health Services; Franklin County Family Counseling Services). *Services available:* The essential Community Mental Health Services: outpatient services, inpatient services to Central Maine General Hospital and St. Mary's Hospital; partial hospitalization (day); 24-hour emergency service and education and consultation services. *Fee basis:* Patients are charged according to their ability to pay on a sliding fee scale. *Office hours:* Monday – 9:00 A.M. to 8:00 P.M.; Tuesday through Friday – 9:00 A.M. to 5:00 P.M. Summer schedule – Monday through Friday – 8:30 A.M. to 5:00 P.M.



Maine Mental Health
Center Areas

Sponsoring organization: Franklin County Area Family Counseling Services, Inc. *Title of Facility or Service:* Franklin County Area Counseling Service. *Address:* 84 Main Street, Wilton, Maine, 04294 or Post Office Box AJ, Wilton, Maine, 04294. *Telephone:* 645-2523. *Statement of purpose:* To solve psychosocial problems in Franklin County and portions of Androscoggin County by diagnosis, treatment, guidance, counseling and education. To guide and assist professional personnel. Assist these persons emotionally or mentally disturbed and provide professional service to individuals and families with personal problems. *Admission procedure:* Direct referral by telephone or letter. Indirect referral from schools, professionals, other agencies, preferably by utilization of our referral forms. *Services available:* Work with schools, evaluation, diagnosis, psychological treatment, direct services: outpatient and limited emergency services, group and individual counseling and psychotherapy; psychiatric consultation, limited psychiatric treatment, weekly psychological clinic at Franklin County Memorial Hospital; indirect services. Consultation and education services with all segments of our population. *Fee basis:* Contributions accepted. *Office hours:* Monday through Friday 9:00 A.M. to 12:00 noon.

*Deputy Director, Bureau of Mental Health.

Sponsoring organization: Oxford County Mental Health Association. *Title of Facility or Service:* Oxford County Mental Health Service. *Address:* 420 Franklin Street, Rumford, Maine, 04276. *Telephone:* 364-2423 (Norway 743-6334). *Statement of purpose:* Community Mental Health program with the objective of assisting residents of Oxford County to achieve and maintain a satisfactory level of functioning. *Admission procedure:* Open intake policy. Appointments can be arranged by calling the clinic at either Rumford Community Hospital or at Stephens Memorial Hospital, Norway. *Services available:* Staff consists of a full-time director with an MSW and ACSW, two part-time social workers, also with MSW and a consulting psychiatrist. *Fee basis:* Sliding scale based on net weekly income. *Office hours:* Rumford: Monday through Friday – 9:00 A.M. to 5:00 P.M. Norway: Tuesday and Thursday – 9:00 A.M. to 5:00 P.M.

Sponsoring organization: Department of Mental Health and Corrections. *Title of Facility or Service:* Psychiatric Services to the Department of Health and Welfare. *Address:* Vickery-Hill building, Chapel Street, Augusta, Maine, 04330. *Telephone:* 289-2781.

A traveling clinic which provides mental health services to children and adults who are clients of the Department of Health and Welfare as well as consultation services to professional personnel. *Serves on a routine basis clients in the Auburn-Lewiston area weekly each Tuesday, and in the Rumford area by appointment.*

Mental Health Center Area V

Counties served: Cumberland, Lincoln, Sagadahoc and York. *Sponsoring organization:* Bath-Brunswick Mental Health Association, Inc. *Title of Facility or Service:* Bath-Brunswick Mental Health Clinic. *Address:* 23 Winship Street, Bath, Maine, 04530. *Telephone:* 443-6341. *Statement of purpose:* To offer services usually offered by mental health clinics, child guidance clinics, and a family counseling agency to maintain and improve the mental health of persons living in the greater Bath-Brunswick area. *Admission procedure:* An application for an appointment is mailed upon request to the person or some professional person or agency in the community. *Services available:* Casework service, psychological evaluation, psychiatric evaluation and psychiatric treatment. *Fee basis:* Fee is on a sliding scale depending on the ability to pay. *Office hours:* Monday – 8:30 A.M. to 5:00 P.M.; Tuesday, Wednesday, Thursday – 8:30 A.M. to 10:00 P.M.; Friday – 8:30 A.M. to 12:00 noon.

Sponsoring organization: Department of Mental Health and Corrections and the Maine Medical Center. *Title of Facility or Service:* Community Mental Health Clinic. *Address:* Maine Medical Center, 22 Bramhall Street, Portland, Maine, 04102. *Telephone:* 871-0111. *Statement of purpose:* To provide outpatient treatment of acute psychotic conditions with follow-up treatment for indigent population of Portland and the Greater Portland area. *Admission procedure:* Initial screening intake with psychiatric social worker followed by presentation of contact to staff to determine acceptability and treatment course. *Services available:* Outpatient psychotherapy including chemotherapy, individual and group therapy, psychiatric evaluations and treatment. Psychological testing and social work counseling. Emergency treatment in accordance with patient's needs, without any formal administrative procedures. *Fee basis:* Ability to pay, determined by income and size of family. *Office hours:* Monday through Friday – 8:00 A.M. to 5:00 P.M.

Sponsoring organization: Rescue, Inc. *Title of Facility or Service:* Bath-Brunswick Rescue, Inc. *Address:* 12 Whittier Street, Brunswick, Maine, 04011. *Telephone:* 443-3300. *Statement of purpose:* To lend the emotional first aid so desperately needed by those contemplating suicide in the Greater Bath-Brunswick area. *Admission procedure:* The trained personnel at the Beltone Answering Service will take the name and telephone number and relay this information to the volunteer on duty. The volunteer will then call the person involved and offer the confidential support needed whether it be on the telephone or by a visit. *Services available:* Supportive therapy. *Fee basis:* None. *Office hours:* Twenty-four hours a day.

Sponsoring organization: Roman Catholic Diocese of Maine, *Title of Facility or Service:* Diocesan Bureau of Human Relations Services. *Address:* 317 Congress Street, Portland, Maine, 04101. *Telephone:* 773-5611. *Statement of purpose:* To strengthen family life by offering direct counseling services to troubled individuals and families regardless of economic status, or religious affiliations; problem assessment and referral services to other community agencies. *Geographical area served:* Kittery to Freeport following boundaries of State Mental Health Districts. Entire State to be served soon, with development of four additional districts. *Fee basis:* None. *Office hours:* Monday through Friday – 9:00 A.M. to 5:00 P.M.

Title of Facility or Service: The Spurwink School. *Address:* 899 Riverside Street, Portland, Maine, 04103. *Telephone:* 207 797-3444. *Statement of purpose:* To provide residential treatment of emotionally disturbed children; follow-up specialized foster home program for emotionally disturbed children; training; research. *Admission procedure:* Receipt of social, psychological and education evaluation material, followed by numerous intake evaluation procedures which are determined on a case by case basis. *Services available:* Residential treatment which includes specialized educational program. Specialized follow-up foster home program. *Office hours:* Twenty-four hours a day. *Fee basis:* $7,000 per year per child.

Sponsoring organization: State of Maine. *Title of Service or Facility:* Children's Psychiatric Hospital. *Address:* Pineland Hospital and Training Center, Box C, Pownal, Maine, 04069. *Telephone:* 688-2401. *Statement of purpose:* Care and rehabilitation of emotionally disturbed children whose ages are between six and sixteen requir-

ing inpatient psychiatric services. *Admission procedure:* Patient may be admitted at the discretion of the Superintendent or sworn application of parent, guardian, or person or institution having legal custody of the child. *Services available:* Psychiatric, psychological, social service, educational, occupational therapy, physical therapy, speech and hearing, physical education and recreation. *Fee basis:* Means test.

Title of Facility or Service: The Harbor School, Inc. *Address:* East Boothbay, Maine, 04538. *Telephone:* 633-5431. *Statement or purpose:* To provide therapy for boys and girls, ages 7-13, with emotional problems. *Admission procedure:* By professional referral. *Services available:* Group therapy, play therapy, individual psychotherapy, remedial education, speech therapy and physiotherapy by properly qualified staff. *Fee basis:* As established by the school. *Office hours:* Twenty-four hours a day.

Title of Facility or Service: Sweetser Children's Home. *Address:* 50 Moody Street, Saco, Maine, 04072. *Telephone:* 284-5981 or 284-5982. *Statement of purpose:* A private nondenominational organization to provide residential treatment for emotionally disturbed children ages 6 to 18 years and resident of Maine. *Admission procedure:* Personal interview with child and parent and complete study made of child's difficulty by professional staff to ascertain if of at least average intelligence – not brain damaged or outright psychotic and resident of Maine. *Services available:* Diagnostic services on outpatient basis. Treatment center for emotionally disturbed children. *Fee basis:* Sliding fee depending upon person's ability to pay. *Office hours:* Monday through Friday – 9:00 A.M. to 5:00 P.M.

Sponsoring organization: Community Child and Family Guidance Association. *Title of Facility or Service:* Community Child and Family Guidance Association. *Address:* 50 Moody Street, Saco, Maine, 04072. *Telephone:* 284-5981 or 284-5982. *Statement of purpose:* To provide a counseling agency serving the citizens of northern York county. *Admission procedure:* A telephone call or letter to set up an appointment time during which the problem can be discussed. *Services available:* Diagnosis and treatment of personal and family problems, (psychological and social). *Geographical area served:* Monday, Thursday, and Friday – Biddeford area . . . offices at the Webber hospital. Tuesday and Wednesday – Sanford area . . . offices at the Henrietta Goodall Sanford Hospital. *Fee basis:* In accordance with the family or individual's ability to pay.

Sponsoring organization: United Fund of Portland. *Title of Facility or Service:* Child and Family Services. *Address:* 187 Middle Street, Portland, Maine, 04111. *Telephone:* 772-6579. *Statement of purpose:* To provide professional counseling services, foster home care, unmarried mother and adoption services to anyone in Portland United Fund ten town area. *Fee basis:* According to established scale. *Office hours:* Monday, Tuesday, Wednesday and Friday – 8:30 A.M. to 5:00 P.M. Thursday – 8:30 A.M. to 9:00 P.M.

Title of Facility or Service: Portland City Hospital. *Address:* 1151 Brighton Avenue, Portland, Maine, 04102. *Telephone:* 774-2623. *Statement of purpose:* To meet the needs of the mentally ill and alcoholics of the City of Portland and all those falling in distress in the City of Portland as prescribed by physicians. *Admission procedure:* Admitted through the police to whom relatives or others concerned have placed a complaint for their safety and the safety of the community. *Services available:* Medical, psychiatric consultation, Social and recreational services. Electric shock treatment on outpatient basis. *Fee basis:* Ability to pay. *Hours:* Twenty-four hour service.

Sponsoring organization: Diocesan Bureau of Human Relations Services, Inc. and Council of Churches. *Title of Facility or Service:* Rescue, Inc. *Address:* 331 Cumberland Avenue, Portland, Maine, 04111. *Telephone:* Emergency – 774-2767; Chapel office – 774-4761. *Statement of purpose:* To study the general problem of suicide with the intention of contributing to its prevention and scientific understanding and to help via mutual assistance in the counseling and rehabilitation of specific individuals contemplating suicide. *Admission procedure:* Anyone may call and be referred to a counselor if he so desires. *Fee basis:* None. *Hours:* Twenty-four hour telephone answering service.

Sponsoring organization: Department of Mental Health and Corrections. *Title of Facility or Service:* Psychiatric Services to the Department of Health and Welfare. *Address:* Vickery-Hill building, Chapel Street, Augusta, Maine, 04330. *Telephone:* 289-2781.

A traveling clinic which provides mental health services to children and adults who are clients of the Department of Health and Welfare as well as consultation services to professional personnel. *Serves on a routine basis clients in the Portland area weekly on each Monday at 178 Middle Street, Portland, Maine.*

Maine Heart Association Notes

20 Winter Street, Augusta, Maine

Cardiac Causalgia

Pain in the chest frequently offers considerable difficulty in diagnosis and treatment. The pain of heart disease is no exception . . . in some patients it is still often difficult and confusing to interpret. . . . That accurate diagnosis is essential for successful therapy requires no further comment.

For . . . years, we have been impressed with one type of chest pain syndrome which has offered considerable difficulty, not only in diagnosis and treatment, but also in interpretation as to pathogenesis. This chronic and almost intractable pain develops in association with heart disease, usually ischemic heart disease, ...

Typically, the patient has had a myocardial infarct or advanced myocardial ischemia with angina pectoris. . . . Frequently, the cardiac disease has been improperly treated and the usually effective measures in medical management have been neglected. . . .

In addition to the true heart pain of angina pectoris . . . the patient has another syndrome associated with chest pain of a different type. The pain . . . is severe, often burning in character, and found anywhere in the chest, but is usually most pronounced anteriorly on the left side. It is of long duration, lasting several hours to days or even months. . . . Parasthesias are frequently present. The discomfort is relieved very little if at all by nitroglycerin, and is most severe at night or when the patient is alone and not distracted. . . . nitroglycerine (is) a useful drug in diagnosis and differentiation of the two types of pain by both the patient and the physician. There are frequently numerous tender trigger points in the chest wall. . . . . . This pain syndrome has all of the characteristics of causalgia minor or major so well known in the arm or leg in the field of peripheral vascular diseases.

The syndrome varies from mild discomfort with little impairment of the patient's function to intense pain and complete incapacity. . . .

Patients with cardiac causalgia are extremely difficult to manage. . . .

As with the well-known forms of causalgia of the limbs, this syndrome of cardiac causalgia is pathogenetically poorly understood. . . . Myocardial ischemia, especially with infarction or cardiac injury following physical trauma as with surgery, could conceivably initiate the syndrome just as injury to an artery and/or nerve of a limb . . . extremital causalgia. . . .

It is likely that the postmyocardial infarction syndrome, the shoulder-hand syndrome, and the postthoracotomy syndrome are variants of the same causalgic state. When recognized early and treated promptly and properly, the causalgic state responds with complete relief. . . .

Cardiac causalgia needs recognition in the clinic and proper management. Even the best management can be most disappointing and discouraging to all, ... It can be a crippling and pathetic disease.

Submitted by Jacob B. Dana, M.D., President, Maine Heart Association.
Reference: Editorial, Burch, G. E., et al, American Heart Journal, Vol. 76 pages 725 to 727, 1968.

County Society Notes

LINCOLN-SAGADAHOC

The Lincoln-Sagadahoc County Medical Society met at The Ledges in Wiscasset, Maine on January 21, 1969. The meeting was called to order by the President, Mary J. Tracy, M.D.

Francis A. Winchenbach, M.D. announced that the Maine Medical Association's Insurance Committee will meet January 29 and February 2 to discuss medical fees in the State of Maine. He stated he would like a report from each area on preferred fees. In fact, he pleaded for cooperation in establishing a fee schedule; then he discussed the mechanism of determining "usual and customary" fees.

Dr. Tracy introduced Drs. Marguerite C. Dunham of Dresden and Peter Evans of Brunswick. Dr. Dunham explained the policies of the Division of Maternal and Child Welfare with regard to obstetrical care for certain indigent patients referred to it.

Dr. Tracy announced that the M.M.A. interim meeting is to be held April 13, 1969 and that any volunteers for committee assignments will be considered.

Carl R. Griffin, Jr., M.D. presented the report of the nominating committee consisting of the following list of officers:

President, Paul A. Fichtner, M.D., Bath
Vice-President, Arkadij Oceretko, M.D., Bath
Secretary-Treasurer, George W. Bostwick, M.D., Newcastle
Delegates to the M.M.A. House of Delegates, Drs. Nelson P. Blackburn, Bath and Mary J. Tracy, Damariscotta. Alternates, Drs. Richard Evans, III, and Alfred T. Holt, both of Bath
Censors, Drs. Samuel L. Belknap, Damariscotta, Carl R. Griffin, Jr., Boothbay Harbor and John F. Dougherty, Bath
Program Committee, Drs. Henry A. Hudson, Boothbay Harbor and James O. Smith, Bath

The slate was unanimously accepted by vote of the members present.

Dr. Winchenbach proposed a toast in honor of the capable President for the past year, who graciously retired.

Dr. Oceretko introduced the speaker, Donald L. Anderson, M.D. of Lewiston, who spoke about benign prostatic hypertrophy, prostatic carcinoma and cancer of the urinary bladder.

A meeting of the Lincoln-Sagadahoc County Medical Society was held at The Ledges in Wiscasset, Maine on February 18, 1969. The meeting was called to order by the President, Paul A. Fichtner, M.D.

Drs. Carl R. Griffin, Jr. and Richard Evans, III stated that they wished for some Society discussion of medical fees. Francis A. Winchenbach, M.D. reported that the committee on insurance of M.M.A. is currently discussing home and office fees as well as surgical fees, and that the whole problem is in a state of flux.

Arkadij Ocerecto, M.D. introduced Buell A. Miller, M.D. of Portland who spoke on Carcinoma of the Cervix and Endometrium.

GEORGE W. BOSTWICK, M.D., *Secretary*

WASHINGTON

A meeting of the Washington County Medical Society was held on January 26, 1969 at the Dennys River Inn, Dennysville, Maine with nine members present.

It was voted to invite Eliot T. Stadler, M.D. of West Goulds-boro, Maine to speak on his study relevant to "Patient Utilization of Medical Care Services."

There was considerable discussion of the reasonable charge criteria as promulgated by Blue Cross, Blue Shield and by Medicare. The Society voted to generally favor the California scale, multiplied by factor 5.

The next item for discussion was Washington County Utilization Review procedure, which would consist of a Utilization Review Committee made up of three physicians; one from Calais Regional Hospital, one from Down East Community Hospital and one from Eastport Hospital. The committee is to be helped by a Medical Record Librarian from each of the facilities. The committee would elect the fourth member, who would act as chairman. The committee would meet twice monthly. Members of the Society discussed the various aspects of this Utilization and Review Committee and it was felt that it would need much further study before it could be put into effect. They voted to table the procedure for the present.

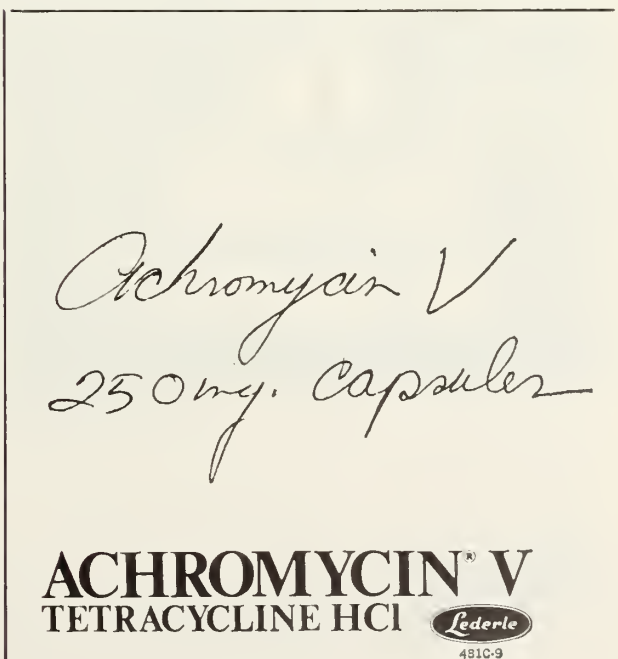
KARL V. LARSON, M.D., *Secretary*

PENOBSCOT

On February 18, 1969 a regular meeting of the Penobscot County Medical Society was held with the President, Lloyd Brown, M.D., presiding. There were thirty members and guests present.

The guest speaker was John Fowler, M.D., Ph.D. of Jackson Laboratory. His presentation was prefaced with a brief description of the laboratory functions which include research, training of high school and university students, and service to the scientific community. Jackson Laboratory has the largest variety of inbred strains of mice, and ships them throughout the world. He mentioned a notable study of his to compatibility genes by Dr. George Snell which has been lauded by physicians engaged in transplantation of tissues and organs.

Dr. Fowler presented three studies: 1) In pregnant mice, the hematopoietic response was measured with and without the spleen, and with iron supplement, 2) It was shown how irradiation depressed blood could be replaced by bone marrow cells



from other mice, and 3) The first allophenic mice were shown, the offspring of four parents, and Dr. Fowler cited the great potential in this experiment with a significant study on striated muscle already having been done.

WILLIAM M. SHUBERT, M.D., *Secretary*

HANCOCK

The Hancock County Medical Society met at the Brookside Restaurant in Ellsworth, Maine on February 12, 1969 with sixteen members and four guests present.

Rufus W. Head, M.D., was introduced by Wesley J. English, M.D. as a former fellow house officer at the Maine Medical Center.

The Continuing Medical Education Committee of the County Society reported on a questionnaire which has just been completed. Preliminary results indicated that members preferred hospital based programs while maintaining speakers for the monthly County Society meeting. The County committee was seen as a clearing house for correlating already operating programs and to suggest innovations. Morris A. Lambdin, M.D. reported on the Pediatric Rehabilitation Hospital that he has proposed. The most recent development was a discussion with the representative of the Eastern Maine Counciling Center in Bangor who approved the project and advised the help of a consultant, Dr. Burnett, whom Dr. Lambdin is to meet March 2nd to 4th. Dr. Lambdin answered specific questions about the services, location, structure of staff, and financing that he foresaw for the hospital and explained the origin of a planning grant of $25,000 for organizing such a hospital. A copy of his letter of application to the Commissioner of Mental Health was placed in the County records.

Robert F. Russell, M.D. reported on the Maine Medical Association's Council meeting. Items were: Indian Health Affairs; Medicard, a collection organization which may be coming into Maine, was explained; mention of L.D. 104 and two proposed changes in the malpractice law. It was moved and voted that the Secretary write to the State Senator and Representative to inform them that the Hancock Medical Society opposed L.D. 104 and the two proposals for change in the malpractice law.

Eliot T. Stadler, M.D. requested that the County representative to the Health Insurance Committee of the Maine Medical Association argue for payment to consultants other than Board qualified under benefits of Health Insurance. He proposed a survey that he wished to carry out on the lay use of medical services in his area.

Paul Leadley, M.D., reported on the status of a paralytic polio case from Hancock County and made recommendations.

The guest speaker of the evening was Theodore S. Hsu, M.D., who gave a concise and interesting talk on eye emergencies.

BRADLEY E. BROWNLOW, M.D., *Secretary*

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News, Notes and Announcements

Hypnosis in Therapy Workshop

A Comprehensive Application of Hypnosis in Therapy Workshop to be sponsored by the New England Society of Clinical Hypnosis and the Oral Surgery Department of the Boston City Hospital will be held at the Mallory Amphitheater, Boston City Hospital, Corner Albany and Massachusetts Avenue, Boston, Massachusetts on May 1-4, 1969.

Eligibility: physicians, dentists, psychologists in good standing in A.M.A., A.D.A. and A.P.A. For further information write to Lawrence M. Staples, D.M.D., P. O. Box 162 – U.S. Rt. #3, Holderness, New Hampshire 03245.

Maine Association of Medical Assistants Annual Meeting

Sunday, May 18, 1969

Sheraton-Eastland Motor Hotel

Registration — 8:00 to 9:00 A.M. followed by an all-day program.

X-RAY OF THE MONTH — NO. 4

Continued from Page 102

tient's aortogram shows irregular narrowing and dilation of the aorta and complete occlusion of the left renal artery.

REFERENCES

1. Selective Angiography in Arteritis of the Aorta and Its Major Branches. M. S. Gotsman et. al., Radiol. 88: 232-247, Feb. 1967.
2. Takayasu's Arteritis and the Aortic Arch Syndrome. Judge, R. D. et. al., Am. J. Med. 32: 379-392, Mar. 1962.

With the broad Polycillin (ampicillin trihydrate) spectrum...



...you have a lot going for you in the wide range of bacterial infections.

PRESCRIBING INFORMATION. For complete information consult Official Package Circular. **Indications:** Infections due to susceptible strains of Gram-negative bacteria (including Shigellae, *S. typhosa* and other Salmonellae, *E. coli, H. influenzae, P. mirabilis, N. gonorrhoeae* and *N. meningitidis*) and Gram-positive bacteria (including streptococci, pneumococci and nonpenicillinase-producing staphylococci).

Contraindications: A history of allergic reactions to penicillins or cephalosporins and infections due to penicillinase-producing organisms.

Precautions. Typical penicillin-allergic reactions may occur, especially in hypersensitive patients. Mycotic or bacterial superinfections may occur. Experience in newborn and premature infants is limited and caution should be used in treatment, with frequent organ function evaluations. Safety for use in pregnancy is not established. In gonorrheal therapy, serologic tests for syphilis should be performed initially and monthly for 4 months. Assess renal, hepatic and hematopoietic function intermittently during long-term therapy.

Adverse Reactions: Skin rash, pruritus, urticaria, nausea, vomiting, diarrhea and anaphylactic reactions. Mild transient elevations of SGOT or SGPT have been noted. Black tongue has been noted in some patients receiving the Chewable Tablets.

Usual Dosage: Adults—250 or 500 mg. q. 6 h. (according to infection site and offending organisms). Children—50-100 mg./Kg./day in 3 to 4 divided doses (depending on infection site and offending organisms). Bacterial meningitis —150-200 mg./Kg./day in 6 to 8 divided doses. Children weighing more than 20 Kg. should be given an adult dose when prescribing orally. In parenteral administration, children weighing more than 40 Kg. should be given an adult dose. Beta-hemolytic streptococcal infections should be treated for at least 10 days.

Supplied: Capsules—250 mg. in bottles of 24 and 100. 500 mg. in bottles of 16 and 100. For Oral Suspension—125 mg./5 ml. in 60, 80 and 150 ml. bottles. 250 mg./5 ml. in 80 and 150 ml. bottles. Chewable Tablets—125 mg. in bottles of 40. Injectable—for I.M./I.V. use—vials of 125 mg., 250 mg., 500 mg., and 1 Gm. Pediatric Drops—100 mg./ml. in 20 ml. bottles.

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to aid in debridement
to facilitate healing
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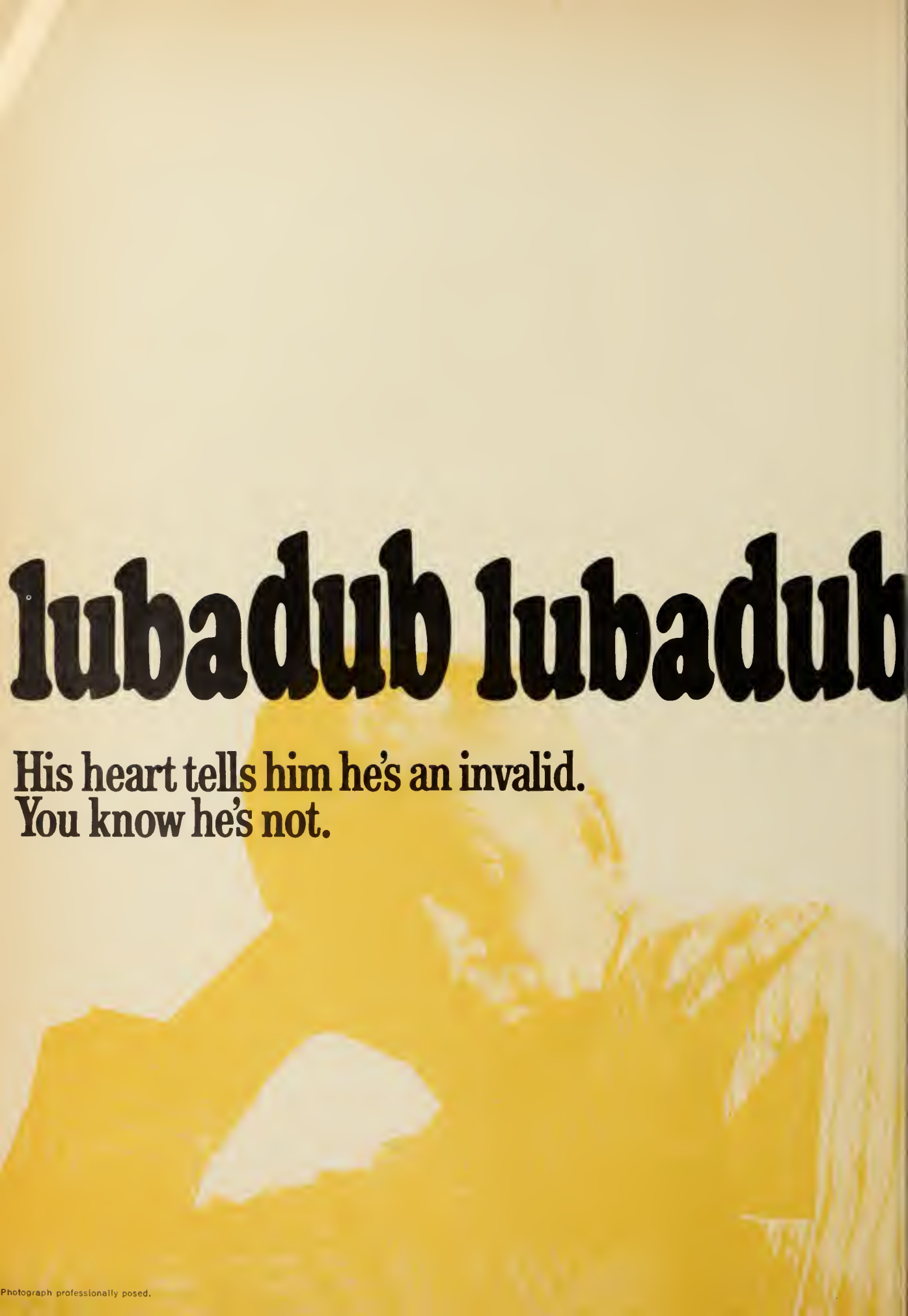
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You know he's not.



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Contraindications: History of sensitivity to meprobamate.

Important Precautions: Carefully supervise dose and amounts prescribed, especially for patients prone to overdose themselves. Excessive prolonged use has been reported to result in dependence or habituation in susceptible persons, as alcoholics, ex-addicts, and other severe psychoneurotics. After prolonged excessive dosage, reduce dosage gradually to avoid possibly severe withdrawal reactions. Abrupt discontinuance of excessive doses has sometimes resulted in epileptiform seizures.

Warn patients of possible reduced alcohol tolerance, with resultant slowing of reaction time and impairment of judgment and coordination.

Reduce dose if drowsiness, ataxia or visual disturbance occurs; if persistent, patients should not operate vehicles or dangerous machinery.

Side Effects include drowsiness, usually transient; if persistent and associated with ataxia, usually responds to dose reduction; occasionally concomitant CNS stimulants (amphetamine, mephentermine sulfate) are desirable. Allergic or idiosyncratic reactions are rare, but such reactions, sometimes severe, can develop in patients receiving only 1 to 4 doses who have had no previous contact with meprobamate. Previous history of allergy may or may not be related to incidence of reactions. Mild reactions are characterized by itchy urticarial or erythematous maculopapular rash, generalized or confined to groin. Acute nonthrombocytopenic purpura with cutaneous petechiae, ecchymoses, peripheral edema and fever have been reported. One fatal case of bullous dermatitis following intermittent use of meprobamate with prednisolone has been reported. If allergic reaction occurs, meprobamate should be stopped and not reinstituted. Severe reactions, observed very rarely, include angioneurotic edema, bronchial spasms, fever, fainting spells, hypotensive crises (1 fatal case), anaphylaxis, stomatitis and proctitis (1 case) and hyperthermia. Treat symptomatically as with epinephrine, antihistamine and possibly hydrocortisone. Aplastic anemia (1 fatal case), thrombocytopenic purpura, agranulocytosis and hemolytic anemia have occurred rarely, almost always in presence of known toxic agents. A few cases of leukopenia usually transient, have been reported on continuous administration.

Meprobamate may sometimes precipitate grand mal attacks in patients susceptible to both grand and petit mal. Extremely large doses can produce rhythmic fast activity in the cortical pattern. Impairment of accommodation and visual acuity has been reported rarely. After excessive dosage for weeks or months, withdraw gradually (1 or 2 weeks) to avoid recurrence of pretreatment symptoms (insomnia, severe anxiety, anorexia). Abrupt discontinuance of excessive doses has sometimes resulted in vomiting, ataxia, tremors, muscle twitching and epileptiform seizures. Prescribe very cautiously and in small amounts for patients with suicidal tendencies. Suicidal attempts have resulted in coma, shock, vasomotor and respiratory collapse and anuria. Excessive doses have resulted in prompt sleep; reduction of blood pressure, pulse and respiratory rates to basal levels; and occasionally hyperventilation. Treat with immediate gastric lavage and appropriate symptomatic therapy. (CNS stimulants and pressor amines as indicated.) Doses above 2400 mg./day are not recommended.

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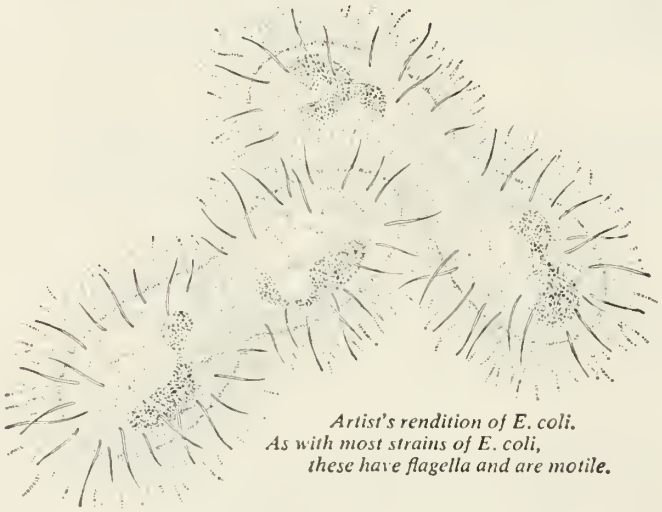
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The rapidity of bacterial multiplication in a favorable urinary environment is well known. Prompt control of acute bladder infection is therefore essential

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Indications: Acute and chronic urinary tract, respiratory and soft tissue infections due to susceptible microorganisms; prophylactically following diagnostic instrumental procedures on genitourinary tract.

Contraindicated in sulfonamide-sensitive patients, pregnant females at term, premature infants, or newborn infants during first 3 months of life.

Warnings: Use only after critical appraisal in patients with liver or renal damage, urinary obstruction or blood dyscrasias. Deaths reported from hypersensitivity reactions, Stevens-Johnson syndrome, agranulocytosis, aplastic anemia and other blood dyscrasias. In closely intermittent or prolonged therapy, blood counts and liver and kidney function tests should be performed. Clinical data insufficient on prolonged or recurrent therapy in chronic renal diseases of children under 6 years.

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for therapy of acute infections caused by group A beta-hemolytic streptococci. At present, penicillin is drug of choice in acute group A beta-hemolytic streptococcal infections; although Gantanol has produced favorable bacteriologic conversion rates in this infection, data insufficient on long-term follow-up studies as to its effect on sequelae of rheumatic fever or acute glomerulonephritis. If other treatment cannot be used and Gantanol is employed in such infections, *important that therapy be continued in usual recommended dosage for at least 10 days.* Observe usual sulfonamide therapy precautions, including adequate fluid intake. Use with caution if history of allergies and/or asthma. Follow closely patients with renal impairment since this may cause excessive drug accumulation. Need for indicated local measures or surgery not obviated in localized infections.

Adverse Reactions: Depending upon the severity of the reaction, may withdraw drug in event of headache, nausea, vomiting, urticaria, diarrhea, hepatitis, pancreatitis, blood dyscrasias, neuropathy, drug fever, Stevens-Johnson syndrome, skin rash, injection of the conjunctiva and sclera, petechiae, purpura, hematuria and crystalluria.

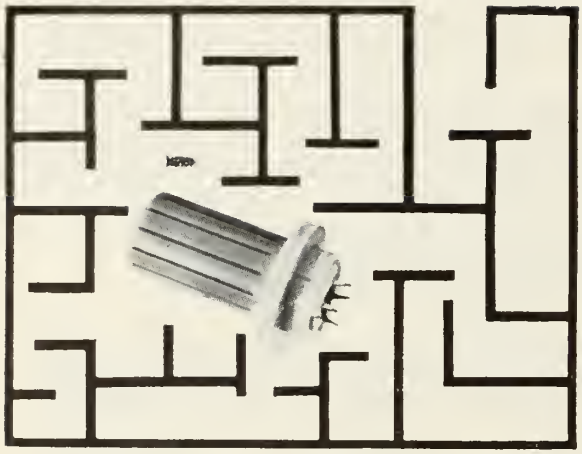
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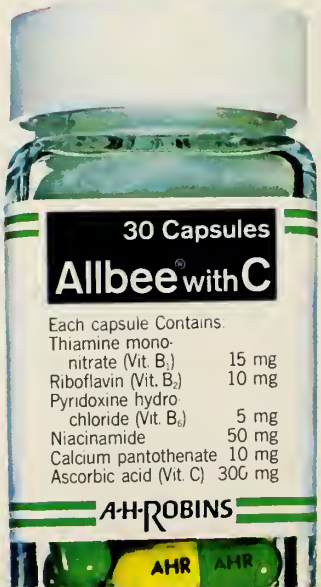
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Thiamine HCl	—	5.0 mg.
Thiamine mononitrate	10.0 mg.	—
Riboflavin	5.0 mg.	—
Niacinamide	50.0 mg.	—
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Ferrous sulfate exsic.	30.0 mg.	—
Ascorbic acid	100.0 mg.	—
		Contains 15% alcohol† †Some Loss Unavoidable.

Contraindication: Carcinoma of the prostate, due to methyltestosterone component.

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Side Effects: In addition to withdrawal bleeding, breast tenderness or hirsutism may occur.

Suggested Dosages: *Male and female*—1 Tablet or Capsule, or 3 teaspoonfuls Liquid, daily or as required.

In the female: To avoid continuous stimulation of breast and uterus, cyclic therapy is recommended (3 week regimen with 1 week rest period—Withdrawal bleeding may occur during this 1 week rest period).
In the male: A careful check should be made on the status of the prostate gland when therapy is given for protracted intervals.

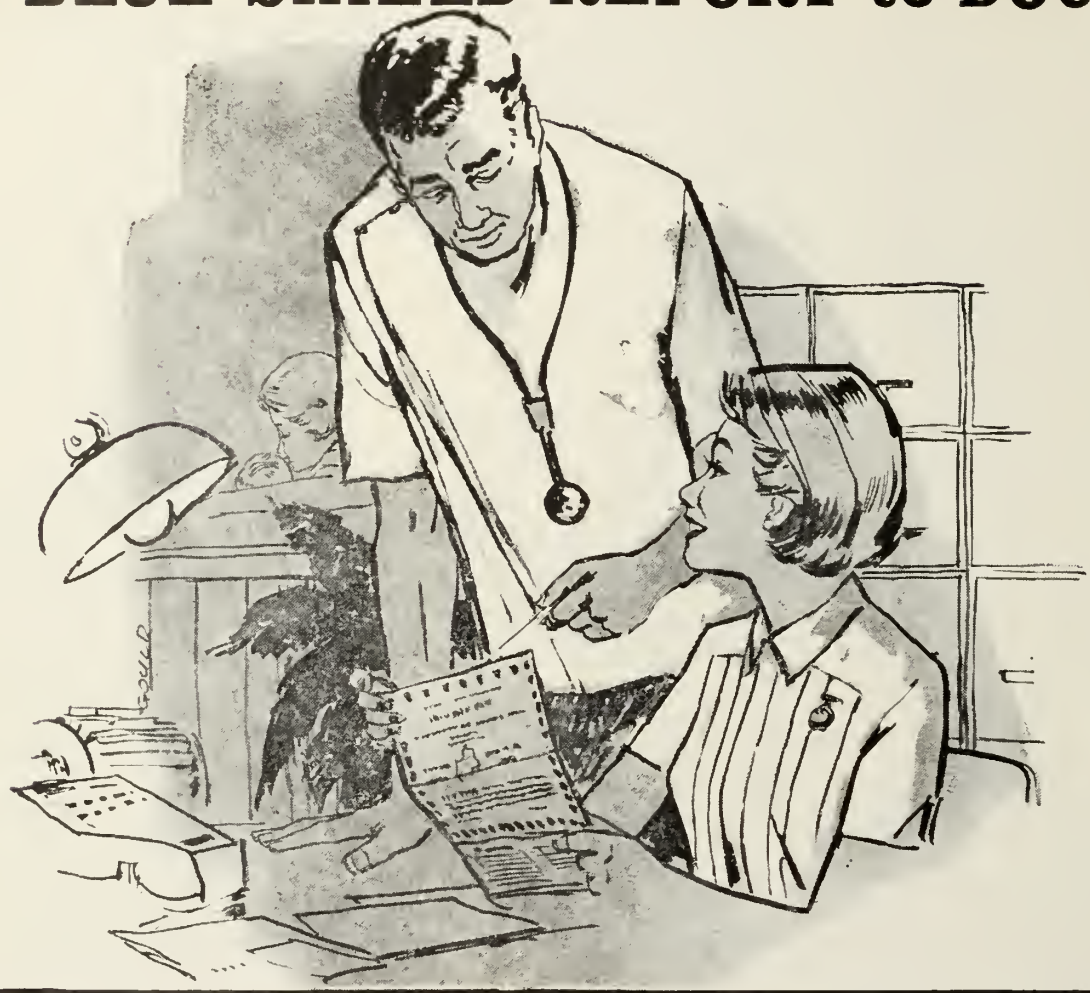
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REPORT # 23

High Option Federal Employees Program

The second national account group to go on a "Usual, Customary and Reasonable Charge" basis is the High Option Federal Employees Program (the first was the General Motors Corp., effective 11-1-68). The effective date is January 1, 1969.

Because of this new approach, anesthesia claims should always indicate the actual anesthesia time.

Also, since the High Option Plan will now cover complete maternity care (rather than the obstetrical delivery only) including pre- and post-natal care, please show the dates of the first and last visits and the number of weeks pregnant at the time of the first visit if complete care is involved. Only one charge for complete care would have to be shown.

If complete care is not involved, please give us the individual services rendered with the dates and charges. The number of weeks pregnant at the time of the first visit should also be noted on the claim.

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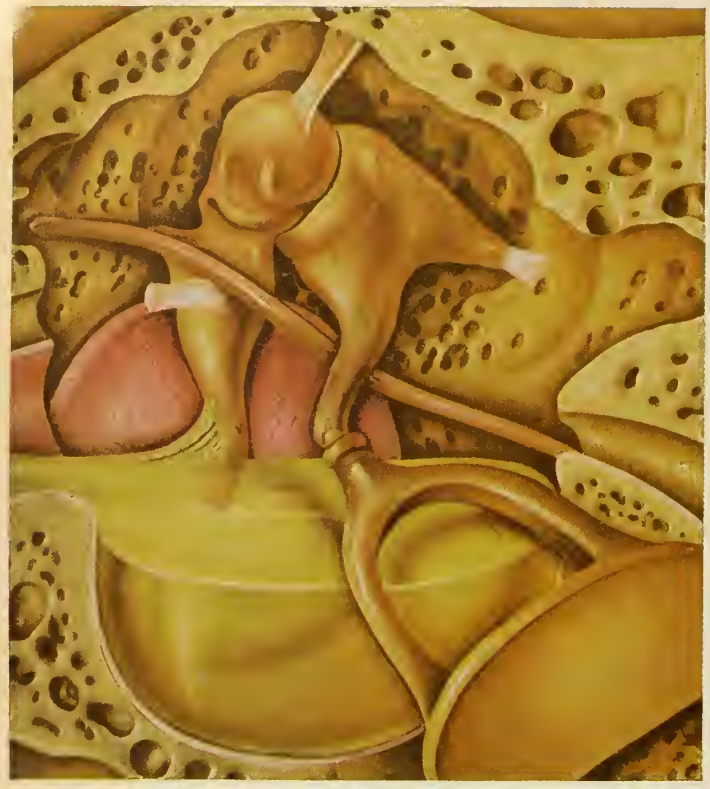
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DEMETHYLCHLORTETRACYCLINE



You've made it one of your specifics in acute otitis media

DECLOMYCIN acts against many strains of H. influenzae, pneumococci and streptococci, the most common invaders. In otitis media, where it is difficult to isolate the causative organism, this coverage may be important. However, some strains may be resistant and other pathogens can be involved.

You've found the high serum levels of DECLOMYCIN important, too. Its prolonged action permits convenient 300 mg b.i.d. or 150 mg q.i.d. administration.

When specimens are obtainable, your culture studies will indicate the usefulness of DECLOMYCIN.

Effectiveness: DECLOMYCIN Demethylchlortetracycline should be equally or more effective therapeutically than other tetracyclines in infections caused by organisms sensitive to the tetracyclines.

Contraindication: History of hypersensitivity to demethylchlortetracycline.

Warning: In renal impairment, usual doses may lead to excessive accumulation and liver toxicity. Under such conditions, lower than usual doses are indicated, and, if therapy is prolonged, serum level determinations may be advisable. A photodynamic reaction to natural or artificial sunlight has been observed. Small amounts of drug and short exposure may produce an exaggerated sunburn reaction which may range from erythema to severe skin manifestations. In a smaller proportion, photoallergic reactions have been reported. Patients should avoid direct exposure to sunlight and discontinue drug at the first evidence of skin discomfort. Necessary subsequent courses of treatment with tetracyclines should be carefully observed.

Precautions: Overgrowth of nonsusceptible organisms may occur. Constant observation is essential. If new infections appear, appropriate measures should be taken. In infants, increased intracranial pressure with bulging fontanels has been observed. All signs and symptoms have disappeared rapidly upon cessation of treatment.

Side Effects: Gastrointestinal system—anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis, pruritus ani. Skin—maculopapular and erythematous rashes; a rare case of exfoliative dermatitis has been reported. Photosensitivity; onycholysis and discoloration of the nails (rare). Kidney—rise in BUN, apparently dose-related. Transient increase in urinary output, sometimes accompanied by thirst (rare). Hypersensitivity reactions—urticaria, angioneurotic edema, anaphylaxis. Teeth—dental staining (yellow-brown) in children of mothers given this drug during the latter half of pregnancy, and in children given the drug during the neonatal period, infancy and early childhood. Enamel hypoplasia has been seen in a few children. If adverse reaction or idiosyncrasy occurs, discontinue medication and institute appropriate therapy. Demethylchlortetracycline may form a stable calcium complex in any bone-forming tissue with no serious harmful effects reported thus far in humans.

Average Adult Daily Dosage: 150 mg q.i.d. or 300 mg b.i.d. Should be given 1 hour before or 2 hours after meals, since absorption is impaired by the concomitant administration of high calcium content drugs, foods and some dairy products. Treatment of streptococcal infections should continue for 10 days, even though symptoms have subsided.

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DEMETHYLCHLORTETRACYCLINE

Capsules: 150 mg; **Tablets:** film coated, 300 mg, 150 mg and 75 mg of demethylchlortetracycline HCl.

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References: 1. Merck & Co., Merck Chemical Division: Antacid Literature Survey, Rahway, New Jersey. (MM3041, R-1286-K REV 463.) 2. Danhof, I.E., report on file. 3. Hoon, J.R.: Arch. Surg. *93*:467 (Sept.) 1966.

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Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma.
Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms have occurred following abrupt discontinuance. Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.
Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.
Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation, have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

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23 MAY 1969

THE JOURNAL
of
The Maine Medical Association

VOLUME 60 MAY, 1969 NUMBER 5

Mercy Hospital Number

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An easy solution to the problem of nasal symptoms of hay fever, colds and sinusitis

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Available: NTZ Nasal Spray in squeeze bottles of 20 ml.; NTZ Solution in bottles of 1 oz. with dropper.



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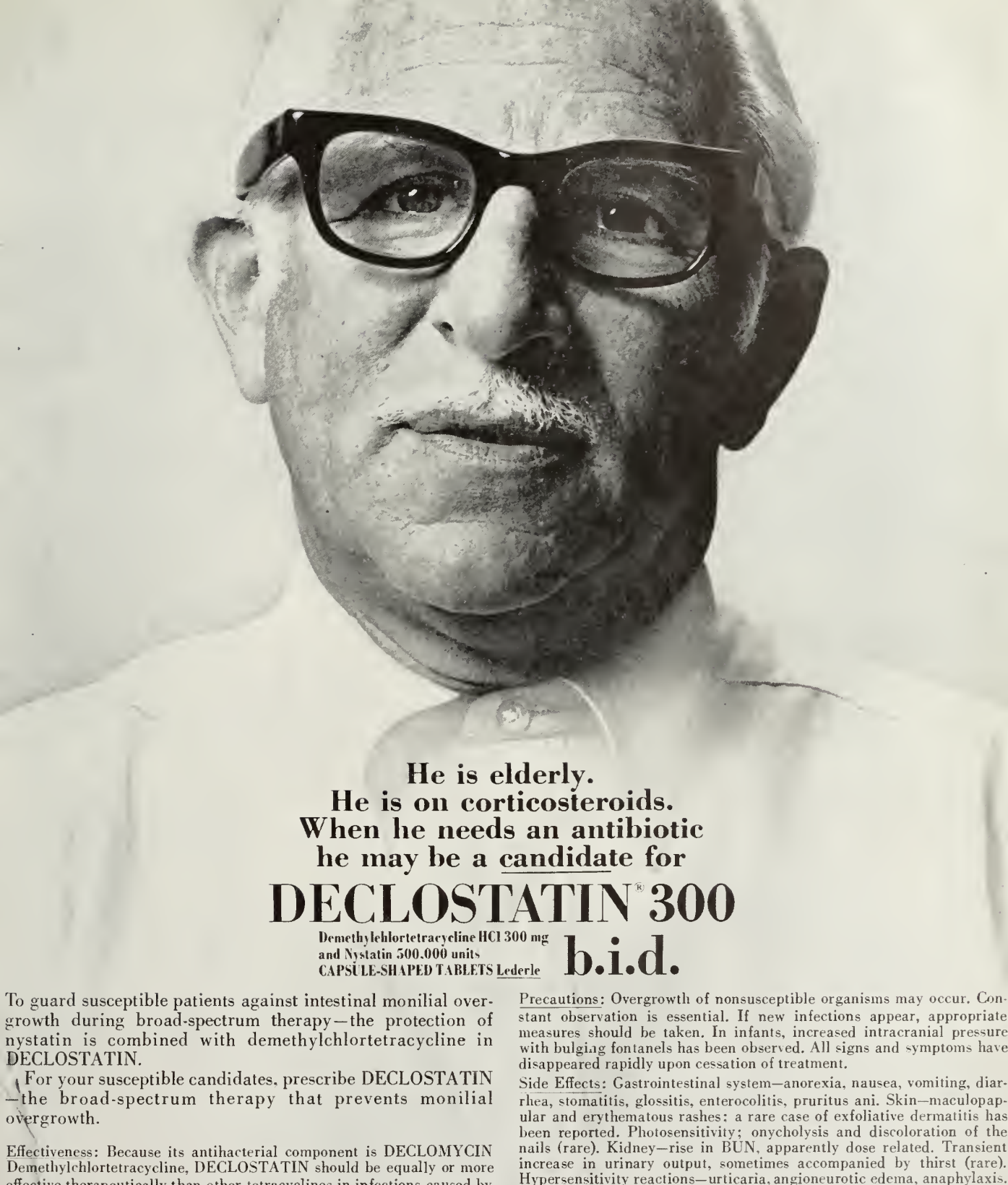
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Precautions: Overgrowth of nonsusceptible organisms may occur. Constant observation is essential. If new infections appear, appropriate measures should be taken. In infants, increased intracranial pressure with bulging fontanels has been observed. All signs and symptoms have disappeared rapidly upon cessation of treatment.

Side Effects: Gastrointestinal system—anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis, pruritus ani. Skin—maculopapular and erythematous rashes; a rare case of exfoliative dermatitis has been reported. Photosensitivity; onycholysis and discoloration of the nails (rare). Kidney—rise in BUN, apparently dose related. Transient increase in urinary output, sometimes accompanied by thirst (rare). Hypersensitivity reactions—urticaria, angioneurotic edema, anaphylaxis. Teeth—dental staining (yellow-brown) in children of mothers given this drug during the latter half of pregnancy, and in children given the drug during the neonatal period, infancy and early childhood. Enamel hypoplasia has been seen in a few children. If adverse reaction or idiosyncrasy occurs, discontinue medication and institute appropriate therapy. Demethylchlortetracycline may form a stable calcium complex in any bone-forming tissue with no serious harmful effects reported thus far in humans.

Average Adult Daily Dosage: 150 mg q.i.d. or 300 mg b.i.d. Should be given 1 hour before or 2 hours after meals, since absorption is impaired by the concomitant administration of high calcium content drugs, foods and some dairy products. Treatment of streptococcal infections should continue for 10 days, even though symptoms have subsided.

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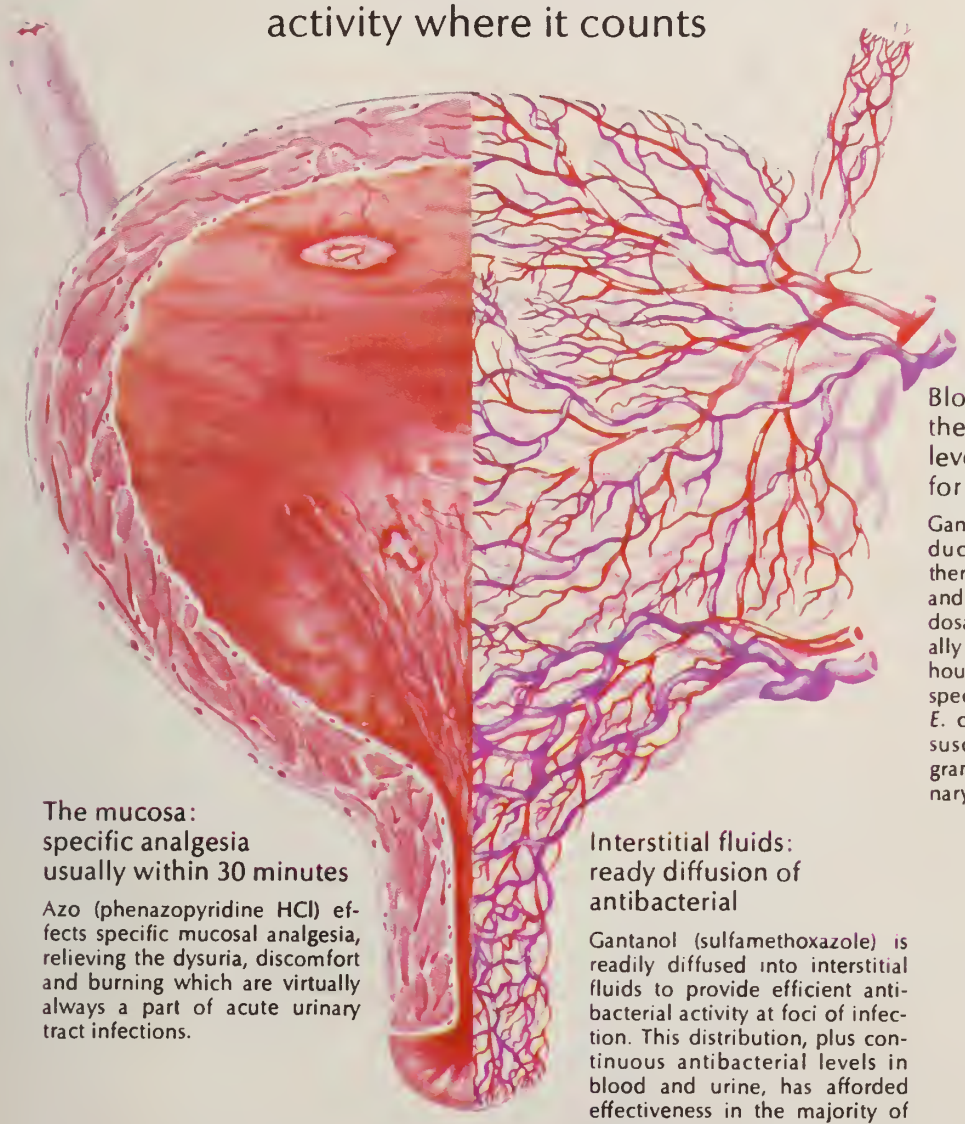
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Contraindicated in sulfonamide-sensitive patients, pregnant females at term, premature infants, newborn infants during the first three months of life, glomerular nephritis, severe hepatitis, uremia and pyelonephritis of pregnancy with gastrointestinal disturbances.

Warnings: Use only after critical appraisal in patients with liver damage, renal damage, urinary obstruction or blood dyscrasias. If toxic or hypersensitivity reactions or blood dyscrasias occur, discontinue therapy. In intermittent or prolonged therapy, blood counts and liver and kidney function tests should be performed.

Precautions: Observe usual sulfonamide therapy precautions including maintenance of an adequate fluid intake. Use with caution in patients with histories of allergies and/or asthma. Patients with impaired renal function should be followed closely since renal impairment may cause excessive drug accumulation. Occasional failures may occur due to resistant microorganisms. Not effective in virus and rickettsial infections.

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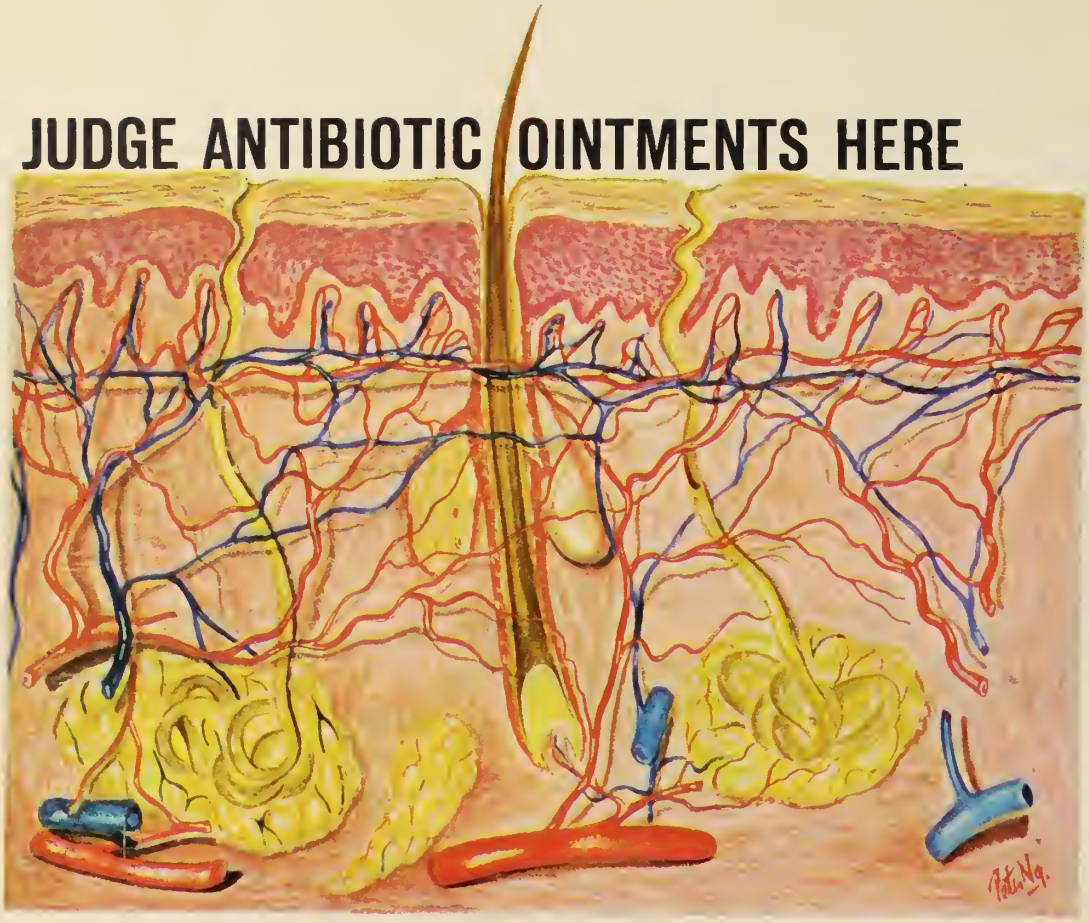
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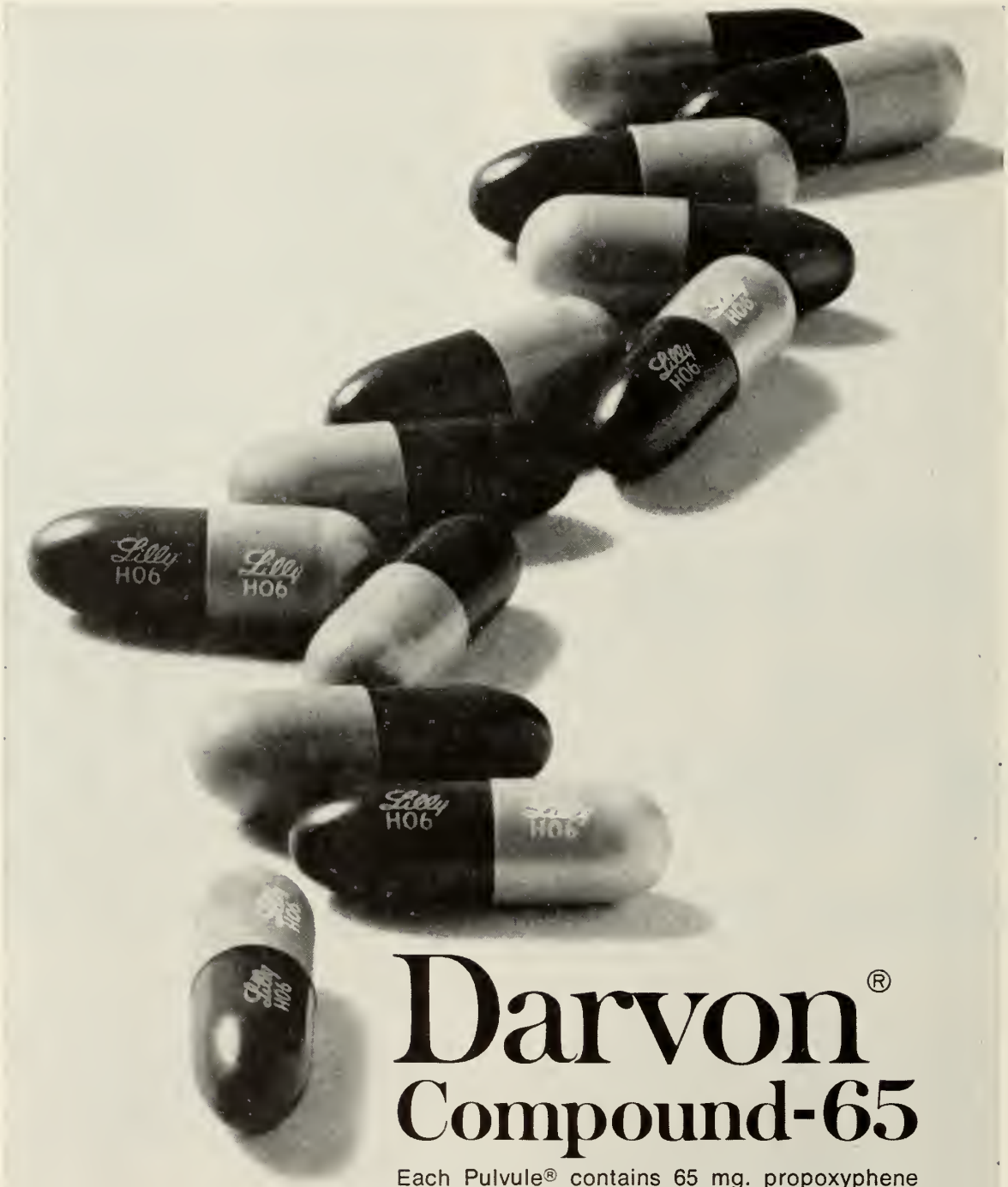
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The Brain Scan

An Ideal Screening Study for Intracranial Pathology

ALFRED E. SWETT, M.D.*

INTRODUCTION

The brain scan has been described as an ideal screening study for evaluation of brain pathology, because of its simplicity of performance and of the minimal risk to the patient. In addition, the ability of the study to actually visualize lesions as well as the accuracy of test, add to its value.

HISTORICAL BACKGROUND

In 1947, fluorescein was injected intravascularly and found to be concentrated in a tumor, in vivo. It was thus possible to visualize the tumor at operation. Later radioactive analogues of fluorescein were used. From 1947 to 1951, 500 patients were studied, utilizing ^{131}I labeled fluorescein. These studies proved the feasibility of tumor localization although many problems were encountered.

In 1949, Selverstone and associates used a Geiger counter at the time of surgery following injection of radioactive phosphorus. Again, detection of the tumor could be accomplished only at the time of surgery.

Radio-iodinated human serum albumin was introduced for brain scanning in 1953. By 1959, Blau and Bender introduced 203 mercury, labeled Chlormerodrin. In 1964, the advantages of 197 mercury labeled chlormerodrin were pointed out, and in that same year, Technetium-99 M pertechnetate was introduced by Harper.

Also, during this time, there was great technical improvement in the scanning equipment. Today numerous means of recording gamma activity are available, ranging from single probe moving detectors to the scintillation or gamma cameras, as well as image intensification cameras.

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PATHOLOGY

It would be well to review the various methods of detecting intracranial pathology as well as a classification of pathologic states.

A. NEOPLASTIC	
Glioma	45%
Meningioma	20%
Pituitary Adenoma	10%
Metastatic Neoplasm	10%
All Others	15%

B. NON-NEOPLASTIC
- I. Inflammatory
  - a. Abscess
    - 1. Metastatic Infection
    - 2. Direct Extension
  - b. Granulomata
- II. Hematoma
  - a. Spontaneous
    - 1. Intrinsic
      - a. Cerebral Hemorrhage
    - 2. Extrinsic
      - (a.) Berry Aneurysm
      - (b.) Angiomata
  - b. Traumatic
    - 1. Epidural
    - 2. Subdural
    - 3. Intracerebral
    - 4. Contusion

MODALITIES

In addition to the usual physical examination and history, there are six methods of detecting intracranial pathology.

Routine skull x-rays may show bony change, and other indirect indicators of pathology, such as intracranial cal-

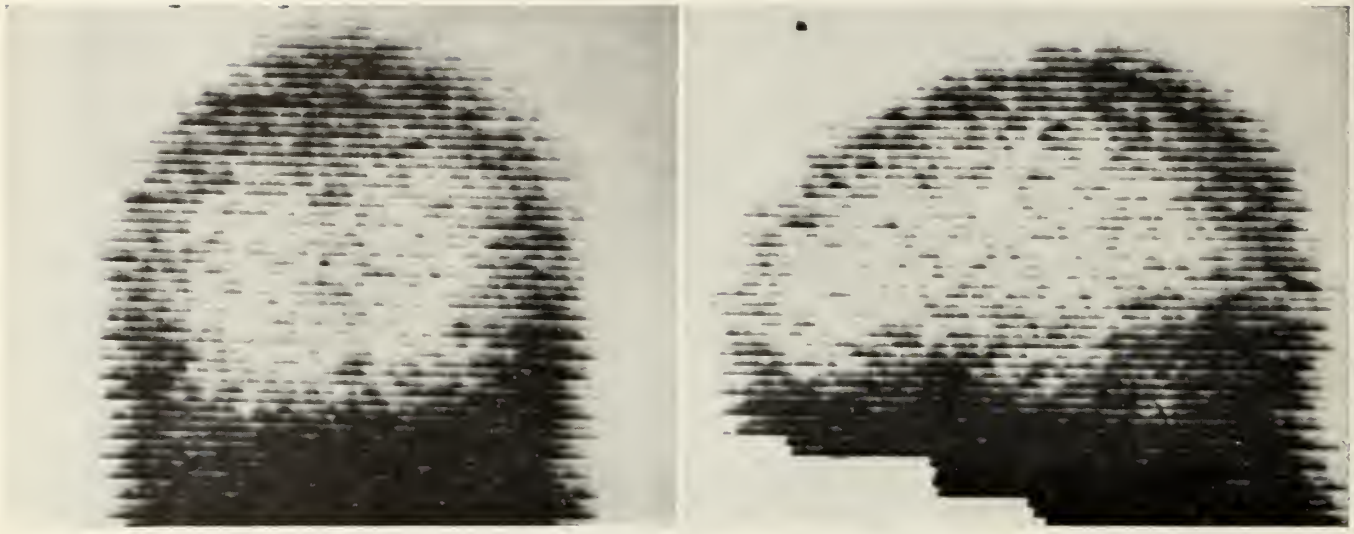


Fig. 1 — Normal 99^{m} Technetium brain scan in 48-year-old white male. Activity distributed symmetrically over vascular areas.

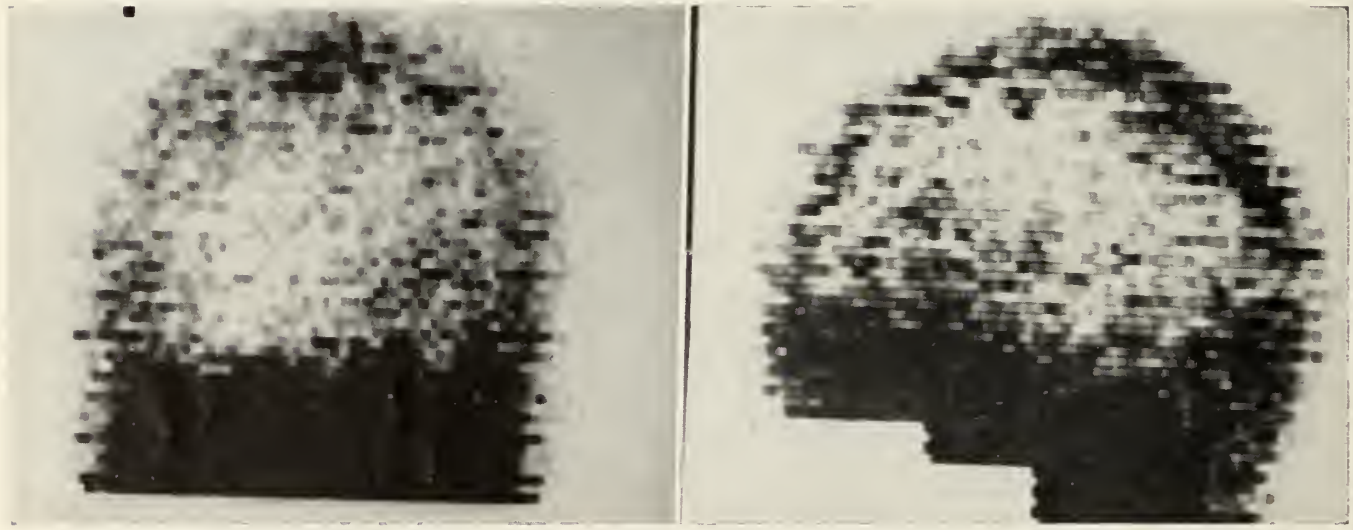


Fig. 2 — A 72-year-old white female with headache, personality change and evidence of increased intracranial pressure. Scan shows abnormal area of activity in left frontal lobe. Surgery was contraindicated in this patient. Type of calcification seen radiographically and clinical course suggest this to be oligodendroglioma.

cification. The electroencephalogram and echoencephalogram also help to localize intracranial pathology. The pneumoencephalogram reflects changes within the ventricular system of the brain. The arteriogram is a highly specific study for determining morphologic changes within vessels of the cerebral circulation. The brain scan, as well as confirming the presence of intracranial abnormality, also has the advantage of actual visualization of the area of pathology.

The skull radiographs, while carrying little risk, also derive relatively less diagnostic accuracy than other studies. The two highly specific studies mainly, arteriogram and ventriculogram carry a recognized risk or morbidity. The relative accuracy of the various modalities is presented in the following chart:

	Accuracy Percent
1. PEG Ventriculogram	93.9
2. Arteriogram	92.3
3. Brain Scan	81.5
4. Electroencephalogram	70.4
5. Echoencephalogram	68.9
6. Skull X-rays	46.9

The Normal Brain Scan

The normal brain scan varies from individual to individual, and with the radiopharmaceutical used, as well as with the type of detector. The major areas of uptake are the mouth, pharynx, mucous membranes of the turbinates and paranasal sinuses, anteriorly. In addition, the areas of

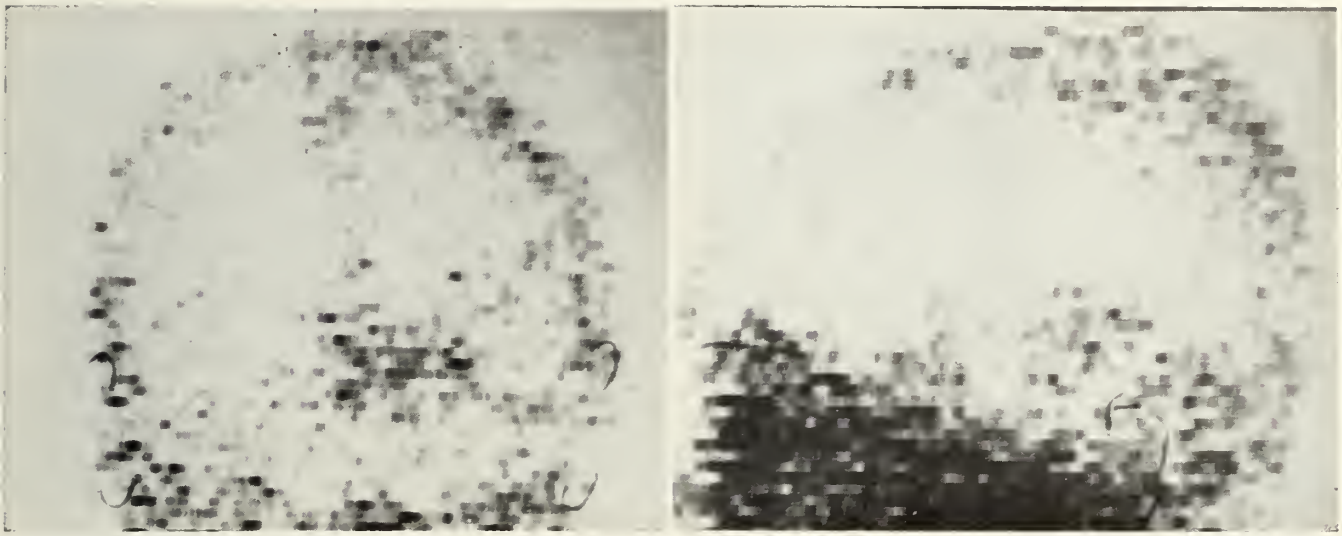


Fig. 3 — 54-year-old white male with long history of seizures which have shown recent exacerbation. Scan shows abnormal accumulation of activity deep in left posterior temporal region. Angiography confirms this to be arteriovenous malformation.

vascularity including the major venous sinuses, temporalis muscle and the posterior neck muscles are also seen.

The recent review of one thousand (1000) consecutive brain scans, published by Witcofski revealed 148 patients with positive brain scans. In this group, 75 were neoplastic, 62 were non-neoplastic, 4 were due to extracranial contamination and 7 false positives were found.

In the non-neoplastic group, the positive scans reveal vascular occlusion, AV malformations, subdural and epidural hematomata, intercerebral hematoma, abscess, encephalitis, craniotomy defect, subarachnoid hemorrhage, meningitis, encephalitis and Sturge-Weber syndrome.

Indications

This procedure aids in detection, characterization and identification of intracranial pathology. Indications are:

1. Screening for brain tumors
2. Detection of cerebral metastases
3. Evaluation of therapy – surgery or radiation
4. Evaluation of cerebral vascular disease
5. Differentation of diffuse and local inflammatory processes
6. Evaluation of trauma – subdural, epidural or hematomata

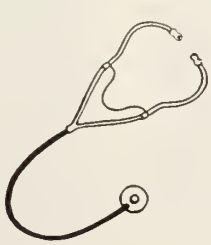
Conclusion

During the past 2 years 150 brain scans have been performed in the Mercy Hospital. Currently the isotope utilized is 99^{m} Technetium Pertechnetate obtained from a Technetium generator. Examples of a normal study as well as primary brain tumor and an ateriovenous malformation are shown in the accompanying illustrations.

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Orthopedic Surgery For The Painful Hip

LAWRENCE M. LEONARD, M.D.*

The adult patient with a painful hip has a very difficult orthopedic problem. The panacea for a degenerated osteoarthritic painful hip still is not here, but there are some conservative measures and a number of different orthopedic approaches that may be helpful.

It is important to get the patient with a painful hip to understand the nature of his problem, and to change his way of life to accommodate to the bad hip. Very simple modalities which may be of tremendous help are the use of a cane, gentle stretching exercises, lying down rest periods, and of course mild analgesics. These may be of enough help to let the patient continue a near normal life.

If, in spite of these, the patient has pain, then many different surgical approaches are available. In a very elderly patient simple measures should be undertaken, rather than massive reconstructive procedures. For example, in the elderly patient multiple tenotomies involving the adductor, abductor and hip flexor muscles are available – the so-called "hanging hip operation." This can give marked relief and entails very little postoperative morbidity.

For the middle-aged patient such tenotomies probably will not give lasting relief, and bony orthopedic procedures are in order. Two of the basic procedures to relieve the pain of an osteoarthritic joint are arthroplasty and fusion.

One problem with hip fusion is that it may produce more motion in the lumbosacral spine. If the patient has a significant amount of osteoarthritis of the spine, this may well be significantly aggravated by hip fusion, and so would be contraindicated. Similarly a bad knee on the same side might prohibit fusion. In addition, two hip fusions are very difficult to live with, and there are some occupations where mobility in the hip would be much more convenient than having a fused hip. However, if the masculature about the hip is weak, then hip fusion is the procedure of choice.

Case Report: Mr. A. L. was a 58-year-old man admitted to Mercy Hospital in October 1968 because of extreme pain in the right hip. He gave a history of having had poliomyelitis at age 7 and was left with a weak right hip and weak right shoulder. In spite of this, he had been very active working in the woods. However, in the last 3 years he had increasing pain in the hip, becoming so severe that it was not relieved by rest and mild medication. This patient not only had a markedly dysplastic hip joint with marked loss of cartilage and degenerative osteoarthritis, but had no extensor or abductor muscles about the hip. Accordingly, he was not a suitable candidate for mold arthroplasty, but was considered a candidate for a hip fusion which was carried out.

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Hip fusion can certainly give a completely painless, stable, hip. Postoperatively a spica cast is necessary for about 6 months and some patients will not accept this and so other procedures are necessary.

An operation which can give the patient a painless stable, and moveable hip is preferable. The procedure of mold (cup,) arthroplasty is a great step in this direction.

Vitallium mold arthroplasties were first performed at the Massachusetts General Hospital approximately 25 years ago. Dr. Aufranc's initial review of over 1000 cases of mold arthroplasty was reported in 1957. Since then thousands more have been done. The basic principle of hip joint arthroplasty is to remove all remaining degenerated cartilage and remove all subchondral bone on both the head of the femur and in the acetabulum down to bare bleeding cancellous bone. These two surfaces are made as congruous as possible by the use of concentric reamers and then the metallic mold is placed between the two surfaces to act as a molding surface for the ensuing clot. This clot, of course, turns to fibrous tissue and with gentle guided motion and through the wonderful process of metaplasia, the fibrous tissue turns to fibrocartilage and even in some cases, hyaline cartilage, indistinguishable from true hyaline cartilage. The same process can be seen in an untreated fracture of a long bone which is not splinted and goes on to a pseudarthrosis. If a fracture is splinted or casted firmly, then of course it goes through the healing process to firm bony union. However, if the fracture site is moved, a joint is formed with the constituents of a joint; synovium and cartilage. This process, although disturbing when treating a fracture, is truly miraculous when we are performing joint arthroplasty.

The use of hip joint arthroplasty has been limited by the extensive surgery, the detailed prolonged postoperative rehabilitation and by the rather extensive sets of specialized tools necessary. The first cup arthroplasty performed at Mercy Hospital, Portland, Maine on Mrs. E. L. had an excellent initial response to surgery.

Case Report: Mrs. E. L. was admitted to the Mercy Hospital in September 1968 because of aseptic necrosis of the left femoral head and extensive degenerative arthritis of the acetabulum.

Her problem began in June of 1966 when she sustained an intertrochanteric fracture which was fixed with a Jewett nail and plate. The head underwent aseptic necrosis and the nail protruded in the acetabulum causing very marked cartilage destruction. Extreme pain with very marked aching in the left hip, left buttock and left anterior groin was her greatest problem. Motion was markedly limited to flexion of only 30 degrees; no rotation was present; and only 10 degrees of adduction with no further abduction was present. All the hip motions which were present were very painful.

Arthroplasty was carried out in early October with dramatic loss of hip pain. She was kept in balance suspension for approximately 3 weeks and then was gradually ambulated and discharged a little more than 5 weeks postoperatively with flexion



Fig. 1

of 90 degrees, external rotation of about 30 degrees, and about 20 degrees of abduction and 20 degrees adduction. The patient had no pain when up and about and was taking no medication. Since, she has continued to gain in strength and to improve. Although she is still in her postoperative period and problems still may develop, she is entirely free of hip pain.

Case Report: The second mold arthroplasty done at Mercy Hospital was a 40-year-old carpenter, Mr. G. P. This patient came to the Emergency Ward initially complaining of very severe hip pain. X-rays showed a congential hip dysplasia with very marked advanced degenerative changes. Inasmuch as this man was a carpenter and also had been hospitalized elsewhere for cirrhosis, the surgical procedure of choice would be a hip fusion. However, during my discussion of the postoperative course of a hip fusion, I mentioned the possibility of having a moveable hip with a mold arthroplasty. The patient was sent home on diet and crutches and gentle exercises and came back to the office a few weeks later, stating he did not want a hip fusion, but wanted to have "that operation that gives you a moveable hip." He insisted that he was not going to stay in a cast post-fusion and accordingly, after further discussion mold arthroplasty was carried out in September 1968. The patient at this time is 5 months postoperative. He is up and about with a 3 point partial weight bearing gait. He has significantly less pain than he did preoperatively. He has flexion to 90 degrees, about 20 degrees of external rotation and abduction and is gaining in motion and strength. Again it is much too early to evaluate final results, but thus far he shows a very satisfactory course.

Fig. 1 shows the preoperative x-ray of Mr. W. B., who is a 55-year-old man with severe asthma controlled only by steroids. Steroid arthropathy developed with aseptic necrosis of the head of the femur and complete cartilage destruction of both the head and the acetabulum. Fig. 2 shows his recent postoperative x-ray. Mold arthroplasty has been done with complete loss of pain in his immediate postoperative period.

We are all fully aware, however, that this is not a panacea and some patients will not have a totally satisfactory hip afterwards.

Replacement of the femoral head with a Moore prosthesis as is commonly done with the displaced subcapital fracture in the elderly patient is also an amazing procedure. However, it is not indicated for degenerative arthritis of the hip joint with involvement of the acetabulum, because although the femoral head is replaced with a



Fig. 2

smooth metal ball, a bad acetabulum is still present. Arthroplasty of just the acetabulum can be done in conjunction with a Moore prosthesis. However, as was pointed out initially by Dr. J. S. Barr[2] and recently by Dr. W. H. Harris[3] sinking of the prosthesis was a rather frequent complication when acetabuloplasty was necessary and it is felt that mold arthroplasty is a far better procedure in these cases.

Cup arthroplasty is quite a formidable procedure. Not all patients can tolerate this nor should they be subjected to it. The Girdlestone procedure entails just excision of the femoral head without prosthetic replacement. This gives a flail joint, but a painless one, and was indicated in the following patient.

Case Report: Mrs. E. C. was a 57-year-old lady with very severe rheumatoid arthritis, confined to her bed and chair the last 3 years and totally unable to walk. She had such severe pains in her hip that she needed Demerol® for control because of the grating and grinding present in the hip when she was moved. Accordingly, the patient was admitted to Mercy Hospital and femoral head excision was done. This simple and expedient procedure reduced her pain sufficiently so that narcotics are no longer necessary.

Another important surgical procedure which may be of benefit to some patients is an osteotomy of the hip to improve the weight bearing relationships between the femoral head and the acetabulum. This procedure, and follow-up data and discussion will be presented in the next Mercy Hospital issue by John A. Godsoe, M.D.

In summary, I have tried to indicate that some simple measures are possible to help the patient with mild hip pain. However, if these measures do not help, then a number of different orthopedic procedures are available which may be of tremendous help. I personally favor the idea of restoring joint motion with mold arthroplasy when possible and hope to be able to present some long term follow-up studies on these patients in the coming years.

Continued on Page 117

X-Ray Of The Month – No. 5*

History

This 52-year-old Korean lady was evaluated for long standing right upper quadrant and right lower quadrant pain. She had no history of previous abdominal surgery. An upper gastrointestinal series was performed.



Diagnosis: Spontaneous Internal Biliary Fistula

Internal biliary fistulas may be spontaneous or the result of surgery on the biliary tract. Surgically induced biliary fistulas are much more frequent than the spontaneous variety. The most common cause of spontaneous internal biliary fistulas is cholelithiasis with perforation of calculi of the gallbladder into the gastrointestinal tract. It has been reported that 90% of all internal fistulas are produced in this way. Approximately 6% are thought to be produced by perforation of a peptic ulcer and 4% are caused by malignant disease of the pancreas, stomach or duodenum. In endemic areas, echinococcosis occasionally accounts for the establishment of such fistulas.

Of all choledochoduodenal fistulas, peptic ulcer disease accounts for 80% as a causative factor. Whereas most internal biliary fistulas occur in women because of the frequency of cholelithiasis in women, choledochoduodenal

Continued on Page 117

*From the Department of Radiology, Maine Medical Center, Portland, Maine 04102.

Maine Heart Association Notes

20 Winter Street, Augusta, Maine

Effects of Propranolol and Isosorbide Dinitrate on Exercise Performance and Adrenergic Activity in Patients with Angina Pectoris

Angina pectoris is a manifestation of a transient imbalance between oxygen delivery and oxygen requirements in a relatively ischemic area of the myocardium. This . . . is the result of the increased myocardial oxygen requirements that occur as a consequence of temporary alterations in cardiac performance during an anginal attack. These alterations . . . are manifested as increments in heart rate and blood pressure which precede the onset of angina and are usually related to heightened levels of adrenergic activity. . . . pharmacological measures to interfere with this activity . . . seemed a logical approach to the treatment of angina. Propranolol, an effective beta-adrenergic receptor-blocking drug, represents one such potential therapeutic agent. . . . .

The present study was undertaken to examine the therapeutic response to propranolol in patients with angina, utilizing the objective criteria of exercise performance . . . as well as subjective improvement of the patient. In addition, we evaluated the effects of isosorbide dinitrate alone and in combination with propranolol. . . .

. . . Propranolol alone increased exercise performance more than 10% in nine of 12 patients. . . . Isosorbide dinitrate alone increased exercise performance by more than 10% in seven of 10 patients. . . . The combination of both drugs resulted in the same incidence of improved performance, although the magnitude of the change was slightly greater than that observed from either drug alone. . . . Subsequently, utilizing amounts of nitroglycerin consumed or numbers of anginal attacks reported, there was greater than 20% improvement in eight of 12 patients from propranolol and in five of 10 from isosorbide dinitrate whereas the combination produced greater than 40% improvement in all 10 patients. . . . In an attempt to compare therapeutic efficacy of the drug regimens, a combined subjective and objective response was utilized. This indicated that nine of 12 patients on propranolol and seven of 10 on idosorbide dinitrate were improved, whereas on the combination all 10 were definitely improved.

. . . Although the combination of both drugs did not show a significant increase in exercise performance over either drug alone, marked improvement in the symptoms was reported by these patients. It is possible that orally administered isosorbide dinitrate is more effective at the lesser degrees of stress which may be responsible for . . . spontaneous attacks of angina. Indeed, the onset of pain occurred at somewhat higher levels of exercise performance in the patients receiving the combination of isosorbide dinitrate and propranolol.

Submitted by Jacob B. Dana, M.D., President, Maine Heart Association.

Reference: Battock, Dennis J., et al, Circulation, Vol. XXXIX, pages 157-169, 1969.

CASE OF THE MONTH*

Case No. 3

This newborn female was a full-term baby. She weighed 8 lb. 5 oz. at birth. It was noted that the mother's amniotic fluid was contaminated with meconium. Very shortly after birth, the newborn had some difficulty in breathing. Her color was poor. Her extremities were cyanotic, and her cry was only fair. She had frequent premature ventricular contractions. No murmur was heard. Breath sounds were heard bilaterally although her breathing was somewhat labored. AP and lateral films of the chest were obtained. On these, Figs. 1 and 2, linear and patchy infiltrations are present extending to both lungs from the hilar areas. Segmental and small atelectatic areas as well as areas of obstructive emphysema are present. The changes due to air trapping namely the overinflated lungs, the increased AP diameter of the chest, and the low in position diaphragm are striking. These changes are quite different from those of hyaline membrane disease. On the latter, granular densities are seen throughout both lungs, the lungs are not over-inflated and the so called "air bronchogram" is noted.

Diagnosis: Aspiration syndrome.

The patient was discharged. The lungs were clear on the x-ray obtained six days after the initial examination. See Fig. 3.



Fig. 1. Irregular patchy and peribronchial densities are seen to extend from both hilae to the mid and lower lung fields. Small atelectatic areas are also noted.



Fig. 2. The increased AP diameter of the chest, the low in position diaphragm, and the over-inflation of the lung are obvious, indicating marked air trapping.

Clinical Discussion

This syndrome is characterized by respiratory distress at or soon after birth, lasting several hours to several days. The onset is frequently marked by profound asphyxia and shock at birth with severe respiratory depression, bradycardia and flaccidity.

The pathogenesis appears to be neonatal asphyxia which causes the fetus to make deep respiratory movements in the uterus or birth canal with subsequent aspiration. Neonatal asphyxia can be caused by abruptio placenta, premature separation, marginal sinus rupture, sudden maternal hypotension, uterine tetany, cord prolapse, or, in general, any mishap which decreases the blood supply to the placenta or fetus. Other important causes appear to be fetal excitants such as excessive manual or instrumental manipulation or large doses of analgesics given to the mother within two hours of delivery. Babies that are post mature or that have a low birth weight for gestational age are particularly prone to this syndrome. Full term and premature infants, however, are not immune.

Physical signs are variable. There may be hyperinflation of the chest, dullness to percussion, harsh or decreased breath sounds or rales. The child may be "full of mucus." Temperature may be normal or subnormal unless there is superimposed infection.

Complications include pneumonia, atelectasis, interstitial and mediastinal emphysema, and pneumothorax. A common accompaniment of this syndrome is cerebral damage. This seems to depend upon the degree and duration of fetal asphyxia. Cerebral damage is signified by as-

*From the Maine Institute of Continuing Medical Education, the Augusta General Hospital in association with Veterans Administration Center, Togus, Maine.

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Editor: Demitrios Nikolaidis, M.D., Radiology Department, Augusta General Hospital, Augusta, Maine.



Fig. 3. The lung fields are now almost completely clear. This film was obtained six days after the original examination.

phyxia neonatorum, irritability, high-pitched cry, anorexia, vomiting, spasticity, flaccidity and seizures.

Treatment is in the form of oxygen, mist and prophylactic antibiotics. Intravenous buffering of a lowered Ph and ventilatory assistance may also be required.

Approximately 10% to 30% of these babies die. Improvement usually occurs within 48 to 72 hours in the uncomplicated case.

The pathology of the autopsied cases reveal the lungs to be firm and poorly aerated. The bronchi contain fluid and many alveoli are collapsed or filled with fluid or amniotic debris. Congestion, edema, or hemorrhage may be prominent. Emphysema may also be present. The capillaries are often distended. Intracranial hemorrhage, cerebral venus congestion, or cerebral edema often coexist.

ACKNOWLEDGEMENT

The clinical discussion was kindly provided by our pediatrician, Dr. Terrance Sheehan.

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ORTHOPEDIC SURGERY FOR THE PAINFUL HIP — *Continued from Page* 113

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X-RAY OF THE MONTH – NO. 5 — *Continued from Page* 114

fistulas occur almost exclusively in men, perhaps due to the higher incidence of peptic ulcer disease in men. This is the 4th reported case in the English literature of a choledochoduodenal fistula occurring in a woman.

The presence of air in the biliary tree or the demonstration of a fistula during an upper gastrointestinal series are the two most reliable x-ray signs of biliary enteric fistula. Both of these signs are present in this case (linear barium and air density to the right of D 12 and L 1).

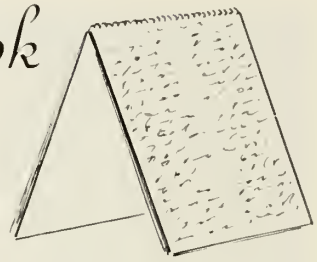
Treatment for this condition is directed at the ulcer disease rather than the fistula and medical management is occasionally successful. However, with ulcer disease serious enough to cause this complication surgical intervention is frequently required.

REFERENCES

William H. Shehadi, M.D.F.A.C.R., *Clinical Radiology of the Biliary Tract,* Chapter 12.
E. Constant, M.D., J. G. Turcotte, M.D., Choledochoduodenal Fistula, The Natural History and Management of an Unusual Complication of Peptic Ulcer Disease, Annals of Surgery, February 1968, Vol. 167, No. 2.

From the Secretary's Notebook





Summary of Proceedings, Interim Meeting, M.M.A. House of Delegates, April 13, 1969 at Brunswick, Maine

The Interim Meeting of the Maine Medical Association House of Delegates was called to order at 2:00 P.M. by the President-elect, Charles F. Branch, M.D. and was presided over by Charles R. Glassmire, M.D., Vice Speaker of the House. The total attendance was 67, including 36 delegates, 9 alternates, the President, President-elect, Executive Director, 8 members of the Council, the Secretary-Treasurer and 10 guests.

General Assembly at 1969 Annual Session: Dr. Glassmire told those present that the General Assembly will be held on Sunday, June 15, 1969 immediately following the Second Session of the House of Delegates (approximately 4:30 P.M.) He urged attendance at this meeting, at which time the election of a President-elect will take place.

The financial statement of Income and Expenditures for fiscal year ending December 31, 1968 and budget proposed for fiscal year ending December 31, 1970 was presented by the Budget Committee, Drs. Paul S. Hill, Jr., Chairman, Robert F. Russell and John D. Denison, ex officio. *Final action on the budget proposed for 1970 will take place at the annual meeting of the House of Delegates on June 15 at The Samoset, Rockland, Maine.*

The President-elect, Dr. Branch, announced the appointment of the following members to serve on the Nominating Committee: Thomas Anton, M.D., 1st District; Peter B. Aucoin, M.D., 2nd District, Chairman; George W. Bostwick, M.D., 3rd District; Richard P. Laney, M.D., 4th District; Robert G. MacBride, M.D., 5th District and Russell M. Lane, M.D., 6th District.

The report of the Nominating Committee shall be the first Order of Business at the Second Meeting of the House of Delegates on Sunday, June 15 at 3:00 P.M.

Attention was called to the recent increase in M.M.A. Group Insurance rates. (Information concerning these rates, which are effective May 8, 1969, has been mailed to all members of the M.M.A.)

It was announced that a $2,000.00 grant to the Maine Medical Education Foundation has been received from the American Cancer Society, Maine Division, Inc. This presentation was made at the meeting of the Council which preceded the Interim Meeting of the House of Delegates.



Grant to M.M.E.F. is presented to Asa C. Adams, M.D., M.M.A. President, right, by Paul S. Hill, Jr., M.D., member of the Board of Directors, American Cancer Society, Maine Division, Inc. Charles F. Branch, M.D., left, M.M.A. President-elect looks on.

George W. Wood, III, M.D., Delegate to the AMA, presented a brief report of the Clinical Meeting of the AMA held in Miami in December.

Resolution

The following resolution re Solicitation and Commercial Advertising of a Medical specialty by Lay Corporations in AMA Publications was submitted by the Lincoln-Sagadahoc County Medical Society. This resolution will be presented for action at the June meeting of the House of Delegates.

WHEREAS: The AMA Board of Trustees voted last fall to open all AMA publications to solicitation and commercial advertising of a medical specialty (pathology) by lay corporations, and

WHEREAS: physicians, by long tradition, are forbidden any activities characterized by self-laudation and solicitation, both of which are essential to commercial advertising, and

WHEREAS: this Trustee policy encourages the practice of medicine by lay corporations, and promotes solicitation, in violation of all codes of medical ethics, and

WHEREAS: this Trustee policy, adopted without con-

sulting the House of Delegates, will set a precedent for regional, state and other medical journals, will spread to other fields of medicine and will lower standards of patient care,

THEREFORE: BE IT RESOLVED by the House of Delegates of the Maine Medical Association, that this body

(1) reaffirms medicine's traditional opposition to the practice of medicine by lay corporations, and to solicitation, and to commercial advertising of the practice of medicine, and

(2) oppose this new AMA Trustee policy vigorously at the Maine Medical Association meeting in Rockland next June, and

(3) call on the Maine delegation to AMA to reverse this Trustee policy at the July AMA convention in New York City.

Committee Reports

Legislative Committee – Kevin Hill, M.D., Chairman. Dr. Hill discussed legislative documents being presented at the 104th Legislative Session, including those documents relating to Chiropractic Services for Injured Employee Under Workmen's Compensation Law, Statute of Limitations for the Malpractice of Physicians, Admission of Treatises and Books in Malpractice Actions and an Act Relating to Termination of Human Pregnancy by Therapeutic Abortion. In discussing the Legislative Document relating to abortion, Dr. Hill recommended that, because of the sensitive nature of this subject, it be studied by the Legislative Research Committee of the Maine State Legislature at a time when the subject is not under active consideration by the Legislature. He also suggested that each member of the M.M.A. make his personal feelings known to representatives in the Legislature. There was prolonged discussion relative to this bill, and it was voted that each county society poll its own members and send results of this poll (number of members for and against) to the Executive Director within two weeks.

Mr. Robert W. O'Connor, Attorney, was present and requested the signature of delegates and alternates to a letter addressed to Senator Wakine G. Tanous, Chairman, Labor Committee, relative to Chiropractic Services for Injured Employee Under Workmen's Compensation Law (L.D. 104 and L.D. 1434.) Mr. O'Connor also urged the delegates to write to members of the Judiciary Committee in opposition to these Legislative Documents, as well as Legislative Documents concerning Statute of Limitations (L.D. 279) and Admission of Treatises and Books in Malpractice Action (L.D. 126). Other Legislative Documents discussed included the Creation of Professional Service Corporations, Nonprofit Hospital or Medical Service Organizations, Communications Between Physicians and Patients, Sale of Certain Drugs, Licensing of Ambulance Drivers, and Establishing Renal Dialysis Centers.

Committee on Liaison Activities Between the Maine State Nurses' Association and the Maine Medical Association – William L. MacVane, Jr., M.D., Chairman.

Committee on the Health of Indians in the State of Maine – James C. Bates, M.D., Chairman.

Diabetes Committee – Melvin Bacon, M.D., Chairman.

Ad Hoc Committee on Continuing Medical Education – Richard T. Chamberlin, M.D., Chairman.

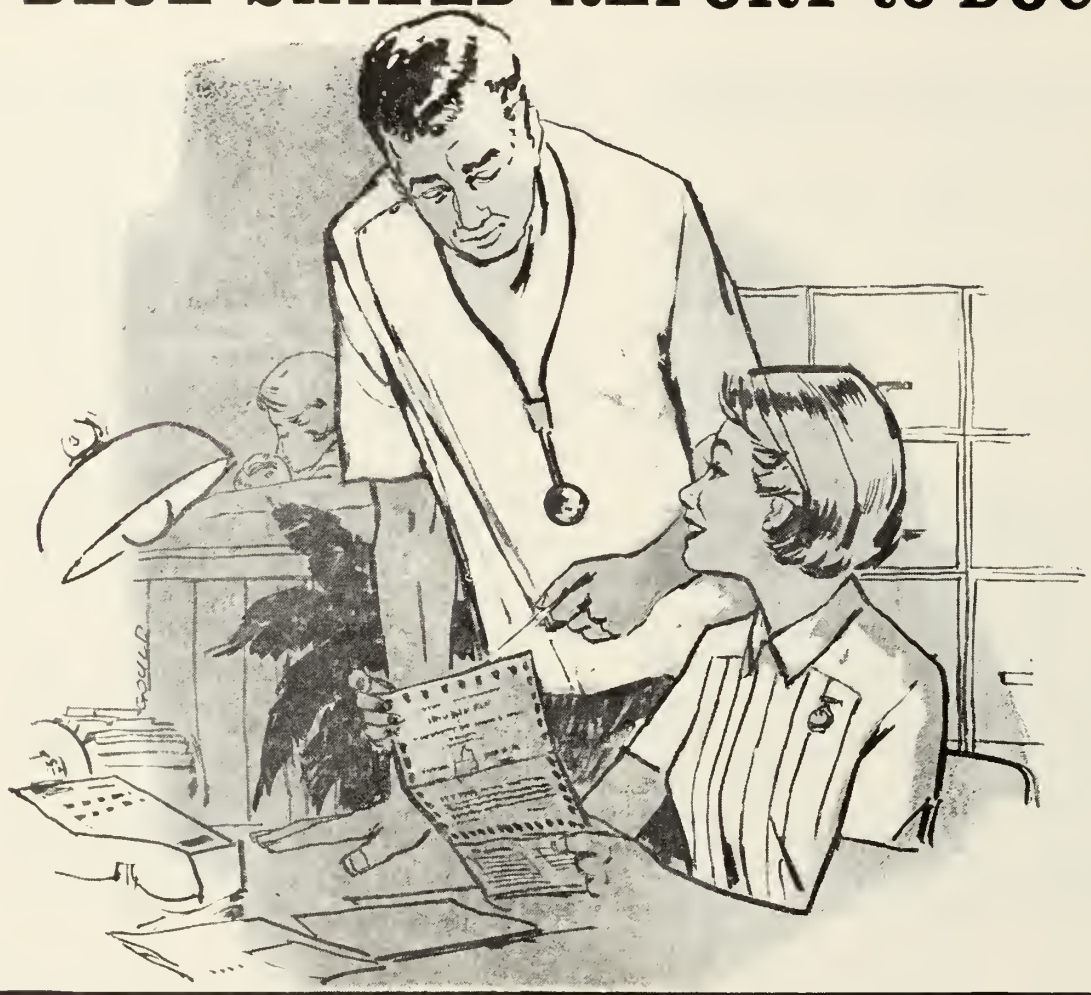
Dr. Bates stated that there have been several meetings of his committee and that they have not reached any definite conclusions as yet. Dr. Chamberlin reported that his committee plans to draw up a resolution and will report later.

The members were reminded that election of Councilors for the First and Second Districts will take place at the Second Meeting of the House of Delegates on Sunday, June 15 at 3:00 P.M. – First District (Cumberland, York), Second District (Androscoggin, Franklin, Oxford).

In accordance with the M.M.A. Bylaws, "Nominations for members of the Council for any District where there is a vacancy shall be made by a *caucus of the members of the House of Delegates of that District.* Each candidate for Councilor must be a resident of the District for which he is nominated."

Adjournment at 4:40 P.M.

A BLUE SHIELD REPORT to DOCTORS



REPORT # 24

Show YOUR Charge On Blue Shield Claims

Under the Blue Shield "BSD" Contract, we pay the physician's charge or the scheduled fee, whichever is less. Under our other Blue Shield programs, scheduled payments are made.

Consequently, since you might not know what coverage a patient may have with us, always show your charge on the claim, not the scheduled fee.

Recommend

With Over 800 Participating MDs

ASSOCIATED HOSPITAL SERVICE OF MAINE
509 FOREST AVENUE
PORTLAND, MAINE 04101

Program - 116th Annual Session Maine Medical Association

June 15. 16. 17. 1969

The Samoset, Rockland

Arranged by the Scientific Committee

MERLE S. BACASTOW, M.D., Portland
Chairman

HAROLD D. CROSS, M.D., Hampden Highlands

L. ARMAND GUITE, JR., M.D., Waterville



Dr. Bacastow

Sponsors:
The Scientific Program for the annual session of the Maine Medical Association, in cooperation with the Technical Exhibitors and the Council of the Maine Medical Association, is made possible this year by grants from:

Merck Sharp & Dohme Postgraduate Program
West Point, Pennsylvania

Eli Lilly and Company State Medical Convention Program
Indianapolis, Indiana

Geigy Pharmaceuticals
Ardsley, New York

For this cooperation and support, the members of the Scientific Committee are grateful.

The general sessions of this program have been developed in conjunction with:

Maine Chapter, American Academy of General Practice

Maine Chapter, American College of Surgeons

Maine Medical Association's Committee on Medical Aspects of Sports

Maine Medico-Legal Society

Specialty Groups

Section on Ophthalmology of the M.M.A.

Maine Society of Anesthesiology

Maine Psychiatric Association

Maine Thoracic Society

Maine Society of Internal Medicine

Maine Society of Clinical Hypnosis

Maine Radiological Society

Maine Chapter of the American Academy of Pediatrics

Maine Academy of Orthopedic Surgeons

Ear, Nose and Throat Group

Information

Registration:
Registration throughout the session will be in the Lobby at The Samoset. Registration fee $1.00.

Sunday	June 15 — 9:00 A.M. to 5:30 P.M.
Monday	June 16 — 9:00 A.M. to 6:00 P.M.
Tuesday	June 17 — 9:00 A.M. to 4:30 P.M.

Telephone: The number at The Samoset is Rockland, 594-8411.

Visiting Delegates:
Introduction of Visiting Delegates will take place at meetings of the House of Delegates on Sunday, June 15.

Scientific and Special Exhibits:
These exhibits, which are listed on page 128, will be located in the Ballroom.

Technical Exhibits:
This year thirty-four companies are contributing to the success of the annual session program by participating in the Technical Exhibits. A list of the exhibiting companies and representatives will be found on pages 128 through 129 of this program.

Please show your appreciation by visiting these exhibits which you will pass on your way through the Lobby en route to the Ballroom (where the Scientific Sessions will be held), to the Dining Room or to the Golf Course.

Sunday, June 15

9:30 A.M. First Meeting of the House of Delegates
Call to order: CHARLES F. BRANCH, M.D., President-elect
Presiding: Speaker of the House, ROBINSON L. BIDWELL, M.D.
Presentation of the A. H. Robins' Physician Award for Community Service

12:30 P.M. Luncheon

3:00 P.M. Second Meeting of the House of Delegates
General Assembly (Immediately following the House of Delegates)
Election of President-elect

6:30 P.M. Dinner
Speaker: REAR ADMIRAL EDWARD ELLSBERG, U. S. Naval Reserve (Ret.), St. Petersburg Beach, Florida
Subject: **Some Reflections on the Cold War**



Rear Admiral Ellsberg

Monday, June 16

Scientific Program

9:30 A.M. to 12:30 P.M.

Presiding – MERLE S. BACASTOW, M.D.

Scientific speakers are supported by a grant from the Merck Sharp & Dohme Postgraduate Program.

9:30 A.M. **Medicine and Society — Retrospect and Prospect**
RICHARD M. MAGRAW, M.D., Deputy Assistant Secretary for Health Manpower, U. S. Department of Health, Education, and Welfare, Washington, D. C.



Dr. Magraw



Dr. Friend

10:30 A.M. **Useless Drugs, Preparations and Prescription Fallacies of Physicians**
DALE G. FRIEND, M.D., Assistant Professor in Medicine, Harvard Medical School and Chairman, Division of Clinical Pharmacology, Peter Bent Brigham Hospital, Boston, Massachusetts

11:30 A.M. **The Secret to Lowering Surgical Morbidity and Mortality**
DAVID M. LITTLE, JR., M.D., Hartford Hospital, Hartford, Connecticut

12:30 to 2:00 P.M. Luncheon

Scientific Program

1:30 to 5:00 P.M.

Welcome – L. ARMAND GUITE, JR., M.D.

Sponsored by the Maine Chapter, American College of Surgeons and the Maine Medical Association's Committee on Medical Aspects of Sports.

1:30 P.M. **Business Meeting, Maine Chapter, American College of Surgeons**

2:00 P.M. **Adrenal Hypertension**
RICHARD H. EGDAHL, M.D., Professor and Chairman, Department of Surgery, Boston University School of Medicine, Boston, Massachusetts

3:00 P.M. **Family Doctor on the Sidelines**
WILLIAM A. HALL, M.D., Director, Athletic Medicine, Princeton University, Princeton, New Jersey

4:00 P.M. **The Physician's Approach to Competitive Sports**
ISAO HIRATA, JR., M.D., Surgeon-in-Chief, Department of University Health, Yale University, New Haven, Connecticut



Let's be specific about Campbell's Soups... and *reducing diets*



There are more than 30 million people in America who are overweight. During the next year, you probably will see more than 1,000 of them in your own practice.

One good way to help these patients is to give them a reducing diet based on ordinary eating patterns.

Campbell has prepared a sensible plan for weight control based on ordinary eating patterns. The plan consists of a patient instruction booklet and a set of menus which provide approximately 1,400 calories daily. The menus are balanced to provide the minimum daily requirements of nutrients.



To obtain a supply for your office write to:
Campbell Soup Company, Box 265, Camden, N. J. 08101

No two women are quite alike...





and no other oral contraceptive is quite like Ovulen-21®

Each tablet contains ethynodiol diacetate 1 mg., mestranol 0.1 mg.

The progestin is distinctive, and for some women this may mean a different clinical response. The Compack® tablet dispenser is distinctive; its functional simplicity makes it virtually patient-proof. The acceptance of Ovulen-21 is distinctive... together with Ovulen®, it is more often prescribed than any other individual contraceptive product currently available.

Indication—Oral contraception.

Contraindications—Thrombophlebitis, thromboembolic disorders, cerebral apoplexy or a past history of these conditions, markedly impaired liver function, known or suspected carcinoma of the breast, known or suspected estrogen-dependent neoplasia, undiagnosed abnormal genital bleeding.

Warnings—Watch for the earliest manifestations of thrombotic disorders (thrombophlebitis, cerebrovascular disorders, pulmonary embolism, retinal thrombosis); if present or suspected discontinue the drug immediately.

British studies reported in April 1968[1,2] estimate there is a seven- to tenfold increase in mortality and morbidity due to thromboembolic diseases in women taking oral contraceptives. In these controlled retrospective studies, involving 36 reported deaths and 58 hospitalizations due to "idiopathic" thromboembolism, statistical evaluation indicated that the differences observed between users and non-users were highly significant. The conclusions reached in the studies are summarized in the table below:

Comparison of Mortality and Hospitalization Rates Due to Thromboembolic Disease in Users and Non-Users of Oral Contraceptives in Britain.

Category	Mortality Rates		Hospitalization Rates (Morbidity)
	Age 20-34	Age 35-44	Age 20-44
Users of Oral Contraceptives	1.5/100,000	3.9/100,000	47/100,000
Non-Users	0.2/100,000	0.5/100,000	5/100,000

No comparable studies are yet available in the United States. The British data, especially as they indicate the magnitude of the increased risk to the individual patient, cannot be applied directly to women in other countries in which the incidences of spontaneously occurring thromboembolic disease may differ.

Discontinue medication pending examination if there is sudden partial or complete loss of vision, or sudden onset of proptosis, diplopia or migraine. Withdraw medication if papilledema or retinal vascular lesions are found.

Since the safety of Ovulen in pregnancy has not been demonstrated, it is recommended that pregnancy be ruled out for any patient who has missed two consecutive periods before continuing the contraceptive regimen. If the patient has not adhered to the prescribed schedule the possibility of pregnancy should be considered at the first missed period.

A small fraction of the hormone agents in oral contraceptives has been identified in the milk of mothers receiving these drugs. The long-range effect to the nursing infant cannot be determined at this time.

Precautions—Pretreatment physical examination should include special reference to the breasts and pelvic organs, and a Papanicolaou smear.

Endocrine and possibly liver function tests may be affected by Ovulen. Therefore, it is recommended that such tests if abnormal be repeated after the drug has been withdrawn for two months.

Pre-existing uterine fibromyomas may increase in size under the influence of progestogen-estrogen preparations.

Because these agents may cause some degree of fluid retention, conditions which might be influenced by this factor, such as epilepsy, migraine, asthma, cardiac or renal dysfunction, require careful observation.

In breakthrough bleeding, and all irregular vaginal bleeding, consider nonfunctional causes. Adequate diagnostic measures are indicated in undiagnosed vaginal bleeding.

Carefully observe patients with a history of psychic depression and discontinue the drug if severe depression recurs.

Any possible influence of prolonged Ovulen therapy on pituitary, ovarian, adrenal, hepatic or uterine function awaits further study.

A decrease in glucose tolerance has occurred in a significant percentage of patients on oral contraceptives. The mechanism of this decrease is obscure. For this reason, diabetic patients should be observed carefully while receiving Ovulen.

Because of the effects of estrogens on epiphyseal closure Ovulen should be used judiciously in young patients in whom bone growth is not complete.

The age of the patient constitutes no absolute limiting factor, although Ovulen therapy may mask the onset of the climacteric.

The pathologist should be informed of Ovulen therapy when relevant specimens are submitted.

Adverse Reactions—A statistically significant association has been shown between use of oral contraceptives and the following serious adverse reactions: thrombophlebitis, pulmonary embolism.

Although available evidence is suggestive of an association, such a relationship has been neither confirmed nor refuted for the following serious adverse reactions: cerebrovascular accidents, neuro-ocular lesions, e.g., retinal thrombosis and optic neuritis.

The following adverse reactions are known to occur in patients receiving oral contraceptives: nausea, vomiting, gastrointestinal symptoms (such as abdominal cramps and bloating), breakthrough bleeding, spotting, change in menstrual flow, amenorrhea during and after treatment, edema, chloasma or melasma, breast changes (tenderness, enlargement, secretion), change in weight, changes in cervical erosion and cervical secretions, suppression of lactation when given immediately post partum, cholestatic jaundice, migraine, allergic rash, rise in blood pressure in susceptible individuals, mental depression.

Although the following adverse reactions have been reported in users of oral contraceptives, an association has been neither confirmed nor refuted: anovulation post treatment, premenstrual-like syndrome, changes in libido, changes in appetite, cystitis-like syndrome, headache, nervousness, dizziness, fatigue, backache, hirsutism, loss of scalp hair, erythema multiforme and nodosum, hemorrhagic eruption, itching.

The following laboratory results may be altered by oral contraceptives: hepatic function: increased sulfobromophthalein and other tests; coagulation tests: increase in prothrombin, Factors VII, VIII, IX and X; thyroid function: increase in PBI and butanol extractable protein bound iodine, and decrease in T^3 uptake values; metyrapone test; pregnanediol determination.

References: 1. Inman, W. H. W., and Vessey, M. P.: Brit. Med. J. 2:193-199 (April 27) 1968. 2. Vessey, M. P., and Doll, R.: Brit. Med. J. 2:199-205 (April 27) 1968.

Before prescribing see Detailed Product Information.

SEARLE Where "The Pill" Began
G. D. SEARLE & CO., P. O. Box 5110, Chicago, Illinois 60680

Specialty Group Meetings

Monday, June 16

12:30 P.M. — Luncheon Meetings

SECTION ON OPHTHALMOLOGY OF THE M.M.A.

ONNI C. KANGAS, M.D., Rockland, presiding

Ultrasonography in Ophthalmology
LOV K. SARIN, M.D., Philadelphia, Pennsylvania

MAINE CHAPTER OF THE AMERICAN ACADEMY OF PEDIATRICS

RUSSELL A. MORISSETTE, M.D., Lewiston, presiding

MAINE ACADEMY OF ORTHOPEDIC SURGEONS

2:00 to 4:00 P.M.

MAINE SOCIETY OF ANESTHESIOLOGISTS

MARY T. DYCIO, M.D., Lewiston, President, presiding

Halothane
DAVID M. LITTLE, JR., M.D., Hartford Hospital, Hartford, Connecticut

MAINE SOCIETY OF CLINICAL HYPNOSIS

WARD A. ALBRO, M.D., Houlton, presiding

Hypnosis in Surgery
PAUL B. VAN DYKE, M.D., Surgeon Emeritus, Good Samaritan Hospital, Suffern, New York

MAINE THORACIC SOCIETY AND THE MAINE SOCIETY OF INTERNAL MEDICINE

Co-chairmen, PETER F. LANSING, M.D., Augusta and RICHARD P. LANEY, M.D., Skowhegan

Recent Advances in Pulmonary Physiology
GEORGE P. LORD, M.D., Director, Pulmonary Research Section, Maine Medical Center, Portland, Maine



Dr. Van Dyke



Dr. Shapiro

Pulmonary Infections and Other Dangers Inherent in the Use of Mechanical Ventilators
STUART C. ALEXANDER, M.D., Physician-in-Charge, Intensive Respiratory Care, Beth Israel Medical Center, New York, New York

Tuesday, June 17

10:00 A.M. — Business Meeting

MAINE MEDICO-LEGAL SOCIETY

RICHARD C. WADSWORTH, M.D., Bangor, President, presiding

12:30 P.M. — Luncheon Meetings

MAINE RADIOLOGICAL SOCIETY

The Biochemical Basis of Metabolic Bone Disease
ROBERT SHAPIRO, M.D., Clinical Professor of Radiology, Yale University School of Medicine, New Haven, Connecticut

MAINE CHAPTER, AMERICAN ACADEMY OF GENERAL PRACTICE

RAPHAEL F. TURGEON, M.D., Westbrook, President, presiding

MAINE PSYCHIATRIC ASSOCIATION

2:00 to 4:00 P.M.

EAR, NOSE AND THROAT GROUP

Program

Woman's Auxiliary
to the
Maine Medical Association

Twentieth Annual Convention

June 15, 16, 17, 1969

The Samoset, Rockland, Maine

Sunday, June 15

1:00-5:00 P.M. Registration

Monday, June 16

9:00 A.M.-5:00 P.M. Registration

10:00 A.M. Board Meeting

12:30 P.M. Luncheon

Presiding: MRS. DONALD COULTON, President

Greetings — ASA C. ADAMS, M.D., President, Maine Medical Association

Introduction of Guests

Election of Officers

Installation of Officers



Mrs. Coulton

Tuesday, June 17

A day for relaxation and visits to points of interest in the area. A list of these will be available at registration desk.

Evening Programs
See the Maine Medical Association Program on preceding pages.

Committee on Arrangements

Mrs. John S. Houlihan	Mrs. Dudley B. Tyson
Mrs. William B. Blaisdell, Jr.	Mrs. John F. McGinn
Mrs. Dexter J. Clough, 2nd	Mrs. Frederick C. Emery

SPECIAL NOTICES

Election of a President-elect

The election of a President-elect will take place at the General Assembly, immediately following the Second Meeting of the House of Delegates, Sunday, June 15.

Election of Councilors

Election of Councilors for the following Districts will take place at the Second Meeting of the House of Delegates on Sunday, June 15 at 3:00 p.m.

First District – Cumberland, York

Second District – Androscoggin, Franklin, Oxford

In accordance with the Bylaws, "Nominations for members of the Council for any District where there is a vacancy shall be made by a caucus of the members of the House of Delegates of that District. Each candidate for Councilor must be a resident of the District for which he is nominated."

Council Meetings

The Council will meet on Saturday, June 14 and daily throughout the session at a time and place to be announced.

Golf Tournament

Daniel R. Shields, M.D., Lewiston, Chairman

HONORARY PINS

Introduction of the Association's Honorary Pin Recipients will be made by Asa C. Adams, M.D., President of the M.M.A., at the Annual Banquet, Monday evening, June 16 at 7:00 P.M.

FIFTY-YEAR PINS

Fifty-Year Lapel Pins will be presented to the following members who were graduated from Medical School in 1919:

Aroostook County

Storer W. Boone, M.D., Presque Isle
McGill University Faculty of Medicine

Francois J. Faucher, M.D., Grand Isle
Montreal University School of Medicine

Franklin County

Currier C. Weymouth, M.D., Farmington
Tufts University School of Medicine

Knox County
C. Harold Jameson, M.D., Camden
Harvard Medical School

Anna Platt, M.D., Rockport
Johns Hopkins University School of Medicine

Sallie H. Saunders, M.D., Camden
Tufts University School of Medicine

Penobscot County
Forrest B. Ames, M.D., Brewer
Harvard Medical School

Piscataquis County
Albert M. Carde, M.D., Milo
Bowdoin Medical School

Norman H. Nickerson, M.D., Greenville
Bowdoin Medical School

FIFTY-FIVE-YEAR PINS

Fifty-Five-Year Pins will be presented to the following members who received Fifty-Year Pins in 1964:

Androscoggin County
Hudson R. Miller, M.D., Auburn
Bowdoin Medical School

James A. Williams, M.D., Mechanic Falls
Bowdoin Medical School

Cumberland County
C. Eugene Fogg, M.D., Portland
Bowdoin Medical School

Joseph R. Ridlon, M.D., Gorham
Bowdoin Medical School

Piscataquis County
Harvey C. Bundy, M.D., Milo
University of Vermont College of Medicine

SIXTY-YEAR PIN

A Sixty-Year Pin will be presented to the following member who received his Fifty-Year Pin in 1959:

York County
Willard H. Bunker, M.D., York Harbor
Bowdoin Medical School

SIXTY-FIVE-YEAR PINS

Sixty-Five-Year Pins will be presented to the following members who received Fifty-Year Pins in 1954:

Penobscot County
Carl J. Hedin, M.D., Brewer
Dartmouth Medical School

York County
Ray L. Whitney, M.D., Cape Porpoise
Harvard Medical School

County Delegates

FIRST DISTRICT

Cumberland County Medical Society
Delegates: Douglas R. Hill, M.D., South Portland, Secretary
(2 years)
David K. Lovely, M.D., Portland
Raphael F. Turgeon, M.D., Westbrook
Kirk K. Barnes, M.D., Brunswick
Stephen E. Monaghan, M.D., Portland
John F. Gibbons, M.D., Portland
Edmund W. Hardy, M.D., Falmouth
(1 year)
Louis N. Taxiarchis, M.D., Portland
Sidney R. Branson, M.D., South Windham
Eugene P. McManamy, M.D., Portland
George F. Sager, M.D., Portland
Alternates
(2 years)
Robert H. Pawle, M.D., Falmouth
Howard P. Sawyer, Jr., M.D., Portland
Harold N. Burnham, M.D., Gorham
Harris Hinckley, M.D., South Portland
Alfred E. Swett, M.D., Portland
Charles E. Skillin, M.D., Portland
(1 year)
Houghton M. White, M.D., Brunswick
John R. Davy, M.D., Portland
Paul V. Davis, M.D., Bridgton
Robinson L. Bidwell, M.D., Portland

York County Medical Society
Delegates: Charles W. Kinghorn, M.D., Kittery, Secretary
Carl E. Richards, M.D., Sanford
Robert F. Ficker, M.D., Kennebunkport
Thomas Anton, M.D., Biddeford
Alternates
Kenneth E. Leigh, M.D., York
Irvin Dorfman, M.D., Biddeford
Paul S. Hill, Jr., M.D., Saco

SECOND DISTRICT

Androscoggin County Medical Association
Delegates: Donald L. Anderson, M.D., Lewiston, Secretary
John W. Carrier, M.D., Lewiston
Frederick B. Lidstone, M.D., Auburn
Wilfrid A. Cloutier, M.D., Lewiston
Joseph J. Rando, M.D., Lewiston
Alternates
Lionel R. Tardif, M.D., Lewiston
Gerard L. Morin, M.D., Lewiston
Donald H. Horsman, M.D., Auburn
Daniel R. Shields, M.D., Lewiston

Franklin County Medical Society
Delegates: Hays G. Bowne, M.D., Farmington, Secretary
Paul E. Floyd, M.D., Farmington
Alternate
Wallace H. Duffy, M.D., Farmington

Oxford County Medical Society
Delegates: Hagop Halladjian, M.D., Rumford, Secretary
Harry L. Harper, M.D., South Paris
Peter B. Aucoin, M.D., Rumford
Alternates
Joelle C. Hiebert, Jr., M.D., Norway
Linwood M. Rowe, M.D., Rumford

THIRD DISTRICT

Knox County Medical Society
Delegates: Richard Waterman, M.D., Waldoboro, Secretary
Thomas W. Williams, M.D., Rockland
Onni C. Kangas, M.D., Rockland
Alternate
Mustafa V. Onat, M.D., St. George

Lincoln-Sagadahoc County Medical Society
Delegates: George W. Bostwick, M.D., Newcastle, Secretary
Nelson P. Blackburn, M.D., Bath
Mary J. Tracy, M.D., Damariscotta
Alternates
Richard Evans, III, M.D., Bath
Alfred T. Holt, M.D., Bath

FOURTH DISTRICT

Kennebec County Medical Association
Delegates: Francis A. Spellman, M.D., Togus, Secretary
Alfredo Monsivais, M.D., Winthrop
Earle M. Davis, M.D., Waterville
Valentine J. Moore, M.D., Waterville
Brinton T. Darlington, M.D., Augusta
Allan J. Stinchfield, M.D., Augusta
John C. Patterson, M.D., Augusta
Alternates
Richard T. Chamberlin, M.D., Waterville
Richard L. Chasse, M.D., Waterville
Theodore M. Russell, M.D., Augusta
John H. Shaw, M.D., Augusta
Richard E. Barron, M.D., Winthrop
John D. Denison, M.D., Gardiner

Somerset County Medical Society
Delegates: John P. Dow, M.D., Pittsfield, Secretary
Richard P. Laney, M.D., Skowhegan
H. Carl Amrein, M.D., Madison
Alternates
Harland G. Turner, M.D., Norridgewock
Edgar J. Smith, M.D., Fairfield

Waldo County Medical Society
Delegate:
Norman E. Cobb, M.D., Belfast
Alternate
George L. Temple, M.D., Belfast

FIFTH DISTRICT

Hancock County Medical Society
Delegates: Bradley E. Brownlow, M.D., Blue Hill, Secretary
Eliot T. Stadler, M.D., West Gouldsboro
Charles H. Knickerbocker, M.D., Bar Harbor
Alternates
Philip L. Gray, M.D., Blue Hill
John D. McIntyre, M.D., Ellsworth

Washington County Medical Society
Delegates: Karl V. Larson, M.D., East Machias, Secretary
Robert G. MacBride, M.D., Lubec
Alternate
Donald M. Robertson, M.D., Milbridge

SIXTH DISTRICT

Aroostook County Medical Society
Delegates: George J. Harrison, M.D., Houlton, Secretary
H. Douglas Collins, M.D., Caribou
Harry M. Heltrich, Jr., M.D., Presque Isle
Melvin R. Aungst, M.D., Fort Kent
Alternates
Frederick J. Gregory, M.D., Caribou
Arthur K. Carton, M.D., Houlton
William A. O'Brien, M.D., Presque Isle

Penobscot County Medical Association
Delegates: William M. Shubert, M.D., Bangor, Secretary
Jay K. Osler, M.D., Bangor
Leonard G. Miragliuolo, M.D., Bangor
Russell M. Lane, M.D., Orono
George O. Chase, M.D., Bangor
Charles D. McEvoy, Jr., M.D., Bangor
Alternates
Thornton W. Merriam, Jr., M.D., Bangor
Lloyd Brown, M.D., Bangor
Stanley J. Evans, M.D., Bangor
Irvin E. Hamlin, M.D., E. Millinocket
Wilfred I. Butterfield, M.D., Lincoln

Piscataquis County Medical Society
Delegates: Isaac Nelson, M.D., Greenville, Secretary
Charles H Lightbody, M.D., Guilford
Alternate
John B. Curtis, M.D., Milo

Visiting Delegates

The Connecticut State Medical Society
NORMAN H. GARDNER, M.D., East Hampton
BERNARD O. NEMOITIN, M.D., Stamford

The Massachusetts Medical Society

New Hampshire Medical Society
STUART W. RUSSELL, M.D., Hanover

Medical Society of the State of New York
THOMAS F. MCCARTHY, M.D., Bronx

The Rhode Island Medical Society
HANNIBAL HAMLIN, M.D., Providence

Vermont State Medical Society
J. WARD STACKPOLE, M.D., Burlington

Delegates to Out-of-State Meetings

The Connecticut State Medical Society
NORMAN W. SAUNDERS, M.D., Portland

The Massachusetts Medical Society
STANLEY J. EVANS, M.D., Bangor

New Hampshire and Vermont State Medical Societies
ASA C. ADAMS, M.D., Orono

Medical Society of the State of New York
ASA C. ADAMS, M.D., Orono

The Rhode Island Medical Society
LEONARD G. MIRAGLIUOLO, M.D., Bangor

Scientific and Special Exhibits

American Cancer Society, Maine Division, Inc.

Associated Hospital Service of Maine

Division of Cancer Control of the State of Maine Department of Health and Welfare

Division of Eye Care and Special Services of the State of Maine Department of Health and Welfare

Health Insurance Council

Maine Association of Medical Assistants

Maine Chapter, American Academy of General Practice

Maine Dairy Council

Maine Heart Association, Inc.

Maine Interagency Council on Smoking and Health

Maine Society of Internal Medicine

Maine's Regional Medical Program

New England Physicians Retirement Program

"Non-Healing Ulcers of the Extremities" — (Exhibit presented by Gerald Marks, M.D. and Thomas B. Mervine, M.D.)

Northern New England Ostomy Club

Pineland Hospital and Training Center

The National Foundation

Venereal Disease Control Section of the State of Maine Department of Health and Welfare

Vocational Rehabilitation Division of the State of Maine Department of Education

"Medicine Avenue"

Technical Exhibits

Abbott Laboratories, North Chicago, Illinois

The Alkalol Company, Taunton, Massachusetts
Representative: Mr. E. W. LeClair

Ayerst Laboratories, 685 Third Ave., New York, New York

Elmer N. Blackwell, Surgical Appliance Specialist, 565 Congress St., Rm. 207, Portland, Maine
Representatives: Mr. Elmer N. Blackwell and Mr. Oakley R. Sanborn

Bristol Laboratories, P. O. Box 657, Syracuse, New York
Representative: Mr. Richard A. Green

Burroughs Wellcome & Co. (U.S.A.) Inc., 1 Scarsdale Rd., Tuckahoe, New York

Ciba Pharmaceutical Company, Summit, New Jersey

Coca-Cola USA, 60 Hickory Dr., Waltham, Massachusetts
Representative: Mr. Anthony Rumo

Endo Laboratories Inc., 1000 Stewart Ave., Garden City, New York

Geo. C. Frye Co., 685 Congress St., Portland, Maine
Representatives: Mr. Douglas Cyr, Mr. Robert Cheney, Mr. David Babb, Mr. Duane Britton, Mr. Arthur Wickham and Mr. John F. Kimball

Lederle Laboratories, Pearl River, New York
Representatives: Mr. R. Maffei, Mr. R. Pelletier, Mr. J. Boucher and Mr. G. Pooler

Maine Surgical Supply Co., 52 Marginal Way, Portland, Maine
Representatives: Mr. Robert Axelsen, Mr. Lawrence Gardiner, Mr. Robert Stokinger, Mr. George Munroe, Mr. Gerry Parker and Mr. Philip Dana, Jr.

Mallard Incorporated, 3021 Wabash Ave., Detroit, Michigan
Representative: Mr. Roland Stickney

Medical Plastics Laboratory, Inc., Gatesville, Texas
Representative: Mr. E. R. Goldman

Mead Johnson Laboratories, Evansville, Indiana
Representative: Mr. Remi St. Onge

Merck Sharp & Dohme, West Point, Pennsylvania

The Wm. S. Merrell Company, Cincinnati, Ohio

Ortho Pharmaceutical Corporation, Raritan, New Jersey

Parke, Davis & Company, Detroit, Michigan
Representatives: Mr. E. E. Giroux and Mr. J. C. McCourt

Programmed Learning, Inc., 350 Old Country Road, Garden City, New York

A. H. Robins Company, 1407 Cummings Dr., Richmond, Virginia
Representative: Mr. Hubert Strom

J. B. Roerig Division, 235 East 42nd St., New York, New York

William H. Rorer, Inc., Fort Washington, Pennsylvania

Ross Laboratories, Columbus, Ohio
Representative: Mr. Harold Hutchinson

Sandoz Pharmaceuticals, Hanover, New Jersey

Schering Corporation, Union, New Jersey
Representatives: Mr. Jack Arlaud and Mr. Dale Selby

G. D. Searle & Co., P. O. Box 5110, Chicago, Illinois
Representatives: Mr. A. D. Zahniser and Mr. A. L. Grimes

Smith Kline & French Laboratories, 1500 Spring Garden St., Philadelphia, Pennsylvania
Representative: Mr. Bruce Greene

Smith, Miller & Patch, Inc., 902 Broadway, New York, New York

E. R. Squibb & Sons, Inc., 745 Fifth Ave., New York, New York

Syntex Laboratories Inc., Stanford Industrial Pk., Palo Alto, California
Representatives: Mr. Louis Montefusco and Mr. Robert J. Wilson

The Upjohn Company, Kalamazoo, Michigan

USV Pharmaceutical Corporation, 800 Second Ave., New York, New York

Warner-Chilcott Laboratories, Morris Plains, New Jersey
Representatives: Mr. Richard S. Marr and Mr. Wayne L. Mowatt

New York City Is Site Of AMA's 1969 Annual Convention

CHICAGO — New York City is the site of the American Medical Association's 118th Annual Convention, July 13 through 17.

The nation's largest city has been host to two AMA annual conventions in this decade — in 1961 and 1965 — and attendance at each exceeded 60,000.

A total registration of 60,000 is predicted for the 1969 convention, including some 22,500 physicians. Medical students, nurses and other members of allied medical professions, industrial exhibitors, and guests make up the rest of the registrants.

Four general scientific sessions are planned:

* Human Sexuality
* Physical Fitness and Aging
* Impact of Medical Education on Patient Care
* Chronic Pulmonary Insufficiency and Air Pollution Problems

Each of 22 scientific sections also will present a program. The 23rd section — on special topics — plans six sessions:

* Drug Utilization (in cooperation with AMA's Council on Drugs)
* Mental Health Dynamics in the Pre-School Child (in cooperation with AMA's Council on Mental Health)
* Disaster Planning for Aviation Accidents (in cooperation with AMA's Committee on Disaster Medical Care)
* Neurological Surgery
* Nuclear Medicine
* Plastic and Maxillofacial Surgery

The May 26 issue of **The Journal of the American Medical Association** will list the entire scientific program.

Necrologies

Carl E. Dunham, M.D.

1898-1969

Carl E. Dunham, M.D., 70, of Portland, Maine died on January 3, 1969. He was born in Portland, Maine on December 5, 1898, son of Wallace and Ella Bowen Dunham.

Dr. Dunham graduated from Bowdoin College in 1924 and received his medical degree from Harvard Medical School in 1933. He interned at the Maine General Hospital in Portland, Maine from 1933 to 1934 and served a residency at the Truesdale Hospital, Fall River, Massachusetts from 1934 to 1935.

He was a member of the Maine Medical Association, the American Medical Association, the New England Obstetrical and Gynecological Society, the American College of Surgeons and a member and past president of the Cumberland County Medical Association. Dr. Dunham was also a staff member of the Maine Medical Center, the Mercy Hospital, the Portland City Hospital and was past president of the Portland City Hospital medical staff.

Surviving are his widow, the former Marion H. Bridgham; a daughter, Mrs. George Lyon of Midland, Michigan; two sisters, the Misses Helen and Louise Dunham, both of Portland and three grandchildren.

Joseph L. Albert, M.D.

1898-1969

Joseph L. Albert, M.D., 70, of Fort Kent, Maine died on January 22, 1969. He was born in St. Francois, New Brunswick on October 27, 1898, son of Xavier and Edith Albert.

Dr. Albert attended local schools in Quebec and received his medical degree from Laval University Medical School in 1925.

He was a member of the Aroostook County Medical Society, the Maine Medical Association and the American Medical Association. Dr. Albert was also past president of the medical staff of Peoples Benevolent Hospital and had served as a medical examiner for the selective service in Fort Kent during World War II.

Surviving are his widow, the former Violet Harvey; six sons, Dr. Rod Albert of Fort Kent, Maurice of Oswego, New York, Camille of Washburn, James of Worcester, Massachusetts, Peter Paul of Caribou and Robert of the U.S. Navy; five daughters, Mrs. Phillip Pelletier of Fort Kent, Mrs. Louis Moreau of Fort Kent, Sister Gertrude, Presentation of Mary, Biddeford, Mrs. Reynold Martin of Los Alamos, New Mexico, and Miss Lucille Albert of Oswego, New York; two brothers, the Rev. Camille Albert of Grand 'Anse, Baie de Chaleur, Quebec and Evance of Van Buren; two sisters, Sister Albert of Montreal, Quebec and Mrs. Leo St. Pierre of St. Francois, New Brunswick and 21 grandchildren.

Urban H. Merrill, M.D.

1894-1969

Urban H. Merrill, M.D., 74, of Etna, Maine died on January 31, 1969. He was born in Woburn, Massachusetts on May 1, 1894, son of William and Abigail Merrill.

Dr. Merrill graduated from Bowdoin College in 1916 and received his medical degree from Bowdoin Medical School in 1920. He was associated with the Mayo Clinic and practiced in Oregon and Massachusetts before moving to Etna twenty years ago.

Dr. Merrill was a member of the Penobscot County Medical Association, the Maine Medical Association and the American Medical Association. He was also a member of the staff at Plummer Memorial and Sebasticook Valley Hospitals.

Surviving are his widow, Catherine C. Merrill; a stepson, Grant Carter of Vancouver, Washington; one stepgrandchild and several cousins.

John R. Osborne, M.D.

1900-1969

John R. Osborne, M.D., 68, of Winthrop, Maine died on February 28, 1969. He was born in Chester, New York on September 5, 1900, son of William and Mary Smith Osborne.

Dr. Osborne graduated from the New York Medical Academy, the University of Virginia Medical School and received his medical degree from McGill University Medical School in 1930. He practiced in Middletown, New York and Houlton, Maine and then located in Winthrop where he practiced until his retirement in 1957.

Dr. Osborne was a member of the Aroostook County Medical Society, the Maine Medical Association and the American Medical Association.

Survivors are his widow, Kathleen McGinness Osborne; two sons, John R. Osborne, Jr. of Elkhart, Indiana and James H. Osborne of Winthrop; a daughter, Mrs. Mary E. Cone of Larchmont, New York; a sister, Miss Elizabeth P. Osborne of Chester, New York and one grandson.

Seth H. Read, M.D.

1911-1969

Seth H. Read, M.D., 57, of Belfast, Maine died on March 28, 1969. He was born in Hinesburg, Vermont on December 6, 1911, son of Horatio S. and Mary Wright Read.

Dr. Read attended Bowdoin College and received his medical degree from Harvard Medical School in 1937. He interned at the Rhode Island Hospital from 1937 to 1938 and served a residency at the Rhode Island State Sanitorium. In 1942, he located in Belfast.

He was a member of the Maine Medical Association, the American Medical Association and the American Academy of General Practice. He was secretary of the Waldo County Medical Society for fifteen years and had served as a member of the Board of Registration of Medicine of the State of Maine.

Surviving are his widow, Dorothy Howard Read; his mother; two sons, George H. and Dean S., all of Belfast; a brother, Paul Read of Bingham; a sister, Mrs. Dwight Grover of East Stoneham and two grandchildren.

In Memoriam

Androscoggin County	
Maurice Brien, M.D.	Lewiston
Aroostook County	
Joseph L. Albert, M.D.	Fort Kent
John R. Osborne, M.D.	Winthrop
Cumberland County	
Carl E. Dunham, M.D.	Portland
Albert J. Grish, M.D.	Kings Park, New York
Raymond A. Tougas, M.D.	Brunswick
Kennebec County	
J. Ramser Crawford, M.D.	Augusta
Edwin W. Harlow, M.D.	Waterville
Frederick T. Hill, M.D.	Waterville
Samuel H. Kagan, M.D.	Augusta
Penobscot County	
George I. Higgins, M.D.	Newport
Urban H. Merrill, M.D.	Etna
Piscataquis County	
Wilbur E. MacDougal, M.D.	Bangor
Waldo County	
Seth H. Read, M.D.	Belfast
York County	
Stephen A. Cobb, M.D.	Sanford

COUNTY SOCIETY OFFICERS

ANDROSCOGGIN

President, John W. Carrier, M.D., Lewiston
Secretary, Donald L. Anderson, M.D., Lewiston

AROOSTOOK

President, Gordon N. Johnson, M.D., Houlton
Secretary, George J. Harrison, M.D., Houlton

CUMBERLAND

President, George F. Sager, M.D., Portland
Secretary, Douglas R. Hill, M.D., South Portland

FRANKLIN

President, Wallace H. Duffy, M.D., Farmington
Secretary, Hays G. Bowne, M.D., Farmington

HANCOCK

President, Winston G. Stewart, M.D., Bar Harbor
Secretary, Bradley E. Brownlow, M.D., Blue Hill

KENNEBEC

President, Joseph R. Crawford, M.D., Augusta
Secretary, Francis A. Spellman, M.D., Togus

KNOX

President, Johan Brouwer, M.D., Rockland
Secretary, Richard Waterman, M.D., Waldoboro

LINCOLN-SAGADAHOC

President, Paul A. Fichtner, M.D., Bath
Secretary, George W. Bostwick, M.D., Newcastle

OXFORD

President, Walter G. Dixon, M.D., Norway
Secretary, Hagop Halladjian, M.D., Rumford

PENOBSCOT

President, Lloyd Brown, M.D., Bangor
Secretary, William M. Shubert, M.D., Bangor

PISCATAQUIS

President, Araminta M. Rodriguez, M.D., Milo
Secretary, Isaac Nelson, M.D., Greenville

SOMERSET

President, Marian L. Strickland, M.D., Canaan
Secretary, John P. Dow, M.D., Pittsfield

WALDO

President, John A. Caswell, M.D., Belfast

WASHINGTON

President, Walter A. Mendyka, M.D., Machias
Secretary, Karl V. Larson, M.D., East Machias

YORK

President, Leopold A. Viger, M.D., Biddeford
Secretary, Charles W. Kinghorn, M.D., Kittery

County Society Notes

CUMBERLAND

A meeting of the Cumberland County Medical Society was held at the Steer Inn in South Portland, Maine on February 20, 1969. The meeting followed the social hour and dinner.

George F. Sager, M.D. introduced the President of the Maine Medical Association, Asa C. Adams, M.D. of Orono, who spoke briefly to the Society.

It was moved and seconded that the proposal by Henry B. Finks, M.D. adding to Article VII of the Constitution, entitled Funds and Expenses, be accepted.

Dr. Laban W. Leiter's proposal as amended by John F. Gibbons, M.D. was approved after being seconded. The resolution is as follows:

Constitution Article V "Council"

The Council will be the Executive Board of this Society. It shall consist of the President, the Vice-President, the Secretary-Treasurer, the immediate Past President of the Society, and three elected Members-at-Large. The Members-at-Large shall be elected for three years with staggered terms of office. Four members shall be a quorum.

Dr. Sager then directed the Chairman of the Nominating Committee, Charles R. Geer, M.D., to select three Members-at-Large; one for a three-year term, one for a two-year term, and one for a one-year term.

A letter by Mr. Paul Martson was read to the Society. This letter dealt with the Implied Consent Law now being presented before the Legislature of the State of Maine. It was moved and seconded that a copy of the letter be sent to the Editor of the Sunday Telegram and that a copy be sent to Drs. Richard C. Dillihunt and Howard P. Sawyer, Jr.

It was voted that a committee be formed by President Sager to investigate the relationship of the CCMS to the Portland City Health Department and our responsibilities and duties.

It was voted that a letter of endorsement be sent to Mr. Stanley F. Hanson, Jr., Executive Director of the Comprehensive Health Association of Southern Maine.

A resolution on the death of Carl E. Dunham, M.D. was read by Alvin A. Morrison, M.D. A copy is to be sent to his widow, and spread upon the records of the Cumberland County Medical Society, the Maine Medical Center, the Mercy Hospital, and the Portland City Hospital.

Roderick L. Huntress, M.D. was elected to Affiliate Membership by the Society.

A list of standing committees and special committees was distributed to the membership and volunteers were solicited from amongst the membership to serve on these committees on the State level if they so desire.

Howard P. Sawyer, Jr., M.D. spoke concerning LD 104.

James H. Bonney, M.D. spoke on the current requirement that in order to be qualified, Nursing Homes are required under the law to have a doctor visit the patient once a month. Dr. Bonney thought this was not a medically oriented idea and that a strong stand should be made. He will write a note to the Society regarding this.

DOUGLAS R. HILL, M.D., *Secretary*

ANDROSCOGGIN

The Androscoggin County Medical Association met at St. Mary's General Hospital in Lewiston, Maine on February 22, 1969. The meeting was called to order by the President, John W. Carrier, M.D.

It was moved and voted that the Society felt that a physician should be present at immunization clinics. The Society felt that before endorsing the program of Auburn schools, more information was needed.

Charles W. Steele, M.D. introduced the panel on fee sched-

ules. Mr. Robert Cash of Union Mutual was the first speaker. He outlined the three aspects of fee schedules and how these are determined, and usual or customary fees being used at present. If a charge is greater than the usual fee, a note explaining the circumstances should accompany the claim. By law, certain restrictions are placed on Medicare. At present the physicians' fees are to remain at the 1968 level. If fees are to be raised, claims should be submitted for these increased fees even though they may not be honored in full. These increases must be presented for at least three months before the increase will be recognized.

Mr. Jerry Merrill of Blue Shield was the next speaker. He discussed Companion Plans which are bound by the same restrictions, by law, as Medicare. The new Blue Shield contracts are not bound by these restrictions. He said that it remains to be seen what the prevailing or customary fees will be in the next year or two.

Champus, which is a Government program, does not have the restrictions that Medicare has.

Niles L. Perkins, M.D., Director, Bureau of Medical Care, Department of Health and Welfare, explained how his department fits into the picture and the financing of his program.

A lively question and answer period followed.

DONALD L. ANDERSON, M.D., *Secretary*

YORK

A meeting of the York County Medical Society was held at the Notre Dame Hospital in Biddeford, Maine on March 12, 1969.

Following the social hour and dinner, the meeting was called to order by the President, Leopold A. Viger, M.D. Mr. Paul R. Buckley of Longley Associates was introduced and gave a very interesting talk on The Beacon Fund.

Daniel F. Hanley, M.D., Executive Director of the Maine Medical Association and chief physician for the Olympic games held in Mexico City, gave a most interesting talk on the care and performance of our team. Very interesting slides were shown of our men in action.

The next meeting will be held at the York Hospital in York, Maine on June 11, 1969.

CHARLES W. KINGHORN, M.D., *Secretary*

HANCOCK

A meeting of the Hancock County Medical Society was held at the Brookside Restaurant in Ellsworth, Maine on March 12, 1969 with twelve members and two guests present.

The Continuing Medical Education Committee made its report, suggesting half-day programs once every two months of topics of interest to members of the Society by lecture, symposium, discussion and patient demonstration. Topics would be of general out-patient interest with wide participation by members. Support from the Regional Medical Program would be sought. It was noted that the recent survey had also indicated a wide concern by members of the Society for a coordinated approach to postgraduate nursing and paramedical personnel education, and it was felt that this might be handled by a separate committee or subcommittee of the Continuing Medical Education Committee. Richard W. Britt, M.D. spoke of the coming requirement for licensure of ambulance crews. He requested that a coordinated disaster plan for the County be developed among the hospitals. Charles H. Knickerbocker, M.D. mentioned that Derek Bush, Administrator of the Mount Desert Island Hospital, had such an operational plan, and it was decided to develop coordination among the hospital administrators.

The speaker of the evening was Wesley J. English, M.D. of Bar Harbor who discussed diagnostic and therapeutic developments over the last 30 years in vascular surgery, including some color slides of his own work in the lower extremity.

BRADLEY E. BROWNLOW, M.D., *Secretary*

LINCOLN-SAGADAHOC

The Lincoln-Sagadahoc County Medical Society met at The Ledges in Wiscasset, Maine on March 18, 1969. The meeting was called to order by the Vice-President, Arkadij Oceretko, M.D.

Nelson P. Blackburn, M.D. spoke of an advertisement by a private incorporated laboratory appearing in the January 6, 1969 issue of the J.A.M.A. He moved that this Society endorse the following resolution to be presented to the Interim Session of the M.M.A. House of Delegates on April 13, 1969:

Whereas: The AMA Board of Trustees voted last fall to open all AMA publications to solicitation and commercial advertising of a medical specialty (pathology) by lay corporations, and

Whereas: physicians, by long tradition, are forbidden any activities characterized by self-laudation and solicitation, both of which are essential to commercial advertising, and

Whereas: this Trustee policy encourages the practice of medicine by lay corporations and promotes solicitation, in violation of all codes of medical ethics, and

Whereas: this Trustee policy, adopted without consulting the House of Delegates, will set a precedent for regional, state, and other medical journals, will spread to other fields of medicine and will lower standards of patient care.

Therefore: BE IT RESOLVED by the House of Delegates of the Maine Medical Association that this body

1. reaffirm medicine's traditional opposition to the practice of medicine by lay corporations, and to solicitation, and to commercial advertising of the practice of medicine, and

2. oppose this new AMA Trustee policy vigorously at the Maine Medical Association meeting in Rockland this June, and

3. call on the Maine delegation to AMA to reverse this Trustee policy at the July AMA convention in New York City.

This resolution was seconded and voted unanimously by the members present. A discussion of AMA policies and practice, as related to physicians in Maine, ensued.



Dr. Oceretko introduced the chairman of the Program Committee, Henry A. Hudson, M.D., who opened a discussion of fees. Francis A. Winchenbach, M.D. described the recent discussions of fees at a meeting of the Health Insurance Committee of the M.M.A. In the Bath area there has been no concerted discussion of minimum fees. The usual vote has been about $5.00 office, $7.00 house call, $10.00 night calls; some charge $6.00 or $7.00 for an office visit. The whole field of fees was discussed but no united schedule proposed or adopted.

Drs. Hudson and Winchenbach outlined the current state of Lincoln-Sagadahoc Regional Medical Planning and coordination of facilities. The subject matter ranged from isotopes to extroverts.

GEORGE W. BOSTWICK, M.D., *Secretary*

News, Notes and Announcements

Maine Association of Medical Assistants
Annual Meeting
May 17, 18, 1969
Sheraton-Eastland Motor Hotel

Registration Chairman, Mrs. Martha Dunlap, c/o George and Charles Geer, M.D., 208 Vaughan Street, Portland, Maine 04102

State of Maine Board of Registration of Medicine
Secretary — George E. Sullivan, M.D.
Waterville, Maine

Physicians Licensed to Practice Medicine and Surgery in the State of Maine
December 10, 11, 12, 1968

Through Examination

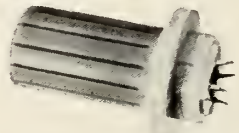
Andrew Abraham, M.D., 721 Huntington Ave., Boston, Mass.
Shapoor S. Ansari, M.D., Box 9, Newberry, Mich.
Simon L. Blumen, M.D., 617 Putnam Pike, Greenville, R.I.
Alberto I. Bonasera, M.D., Darlington Bldg., Ponce, Puerto Rico
Miguelito A. Cabelin, M.D., 3 Shawmut St., Lewiston, Me.
Rodolfo G. Carlstein, M.D., Maine Medical Ctr., Portland, Me.
Noel P. Daly, M.D., 238 So. Huntington Ave., Boston, Mass.
Alexandra B. Dimich, M.D., 435 E. 70th St., New York, N.Y.
Edward T. R. Holt, M.D., 33 Lafayette St., Rochester, N.H.
Antony J. Kenmuir-Evans, M.D., 83 Main St., Kennebunk, Me.
Mohammad Y. Khan, M.D., 270 Henderson St., Jersey City, N.J.
Si E. Kim, M.D., 2720 W. 15th St., Chicago, Ill.
Jurgen Korth, M.D., 2 Autumn St., Boston, Mass.
Tae H. Lee, M.D., 9 Murdock Crt., Brooklyn, N.Y.
Francis C. Lee, M.D., 1414 East 59th St., Chicago, Ill.
Taghi Meshkati, M.D., 143 Cold Spring Rd., Syosset, N.Y.
Beno Michel, M.D., 107 Chatham Way, Mayfield Hts., Ohio
Agatha L. Park, M.D., 1340 W. Morse Ave., Chicago, Ill.
Francisco J. Sayago, M.D., Union Hosp., Fall River, Mass.
In S. Song, M.D., 801 Harvard Place, Bergen, N.J.
Mehdi Tavassoli, M.D., 12 Bailey St., Dorchester, Mass.
Nasser Tehranian, M.D., 19 Middlesex St., Winchester, Mass.
Ahad Vossoughian, M.D., 45 Golder St., Lewiston, Me.
Cyrus Youssefnia, M.D., 1925 Glenwood Rd., Brooklyn, N.Y.
Paolo G. Zerbi, M.D., 145 Lake Dr., Milledgeville, Ga.

Through Reciprocity

Norman M. Bress, M.D., 29 Washburn Ave., Portland, Me.
Stephen S. Chan, M.D., 12 So. Ave., Woppingers Falls, N.Y.
Pay-zen Cheng, M.D., 96 Jameson, Toronto, Ontario, Can.
Frances M. Dyro, M.D., 2028 E. Lombard St., Baltimore, Md.
Alan M. Elkins, M.D., c o Maine Medical Ctr., Portland, Me.
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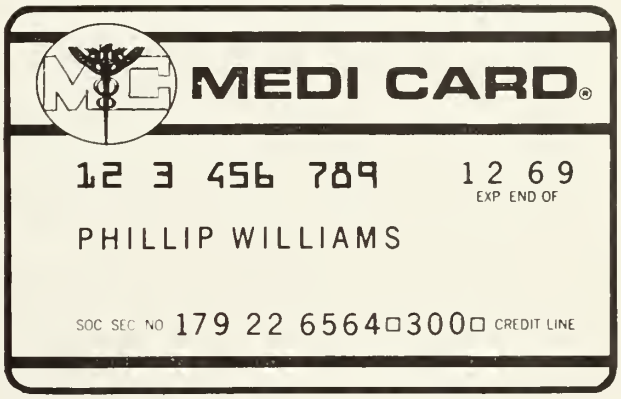


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Precautions: With a positive reaction, consider further diagnostic procedures. Use with caution in persons with active tuberculosis or known allergy to acacia. Vesiculation, ulceration, or necrosis may occur at the test site in highly sensitive persons.

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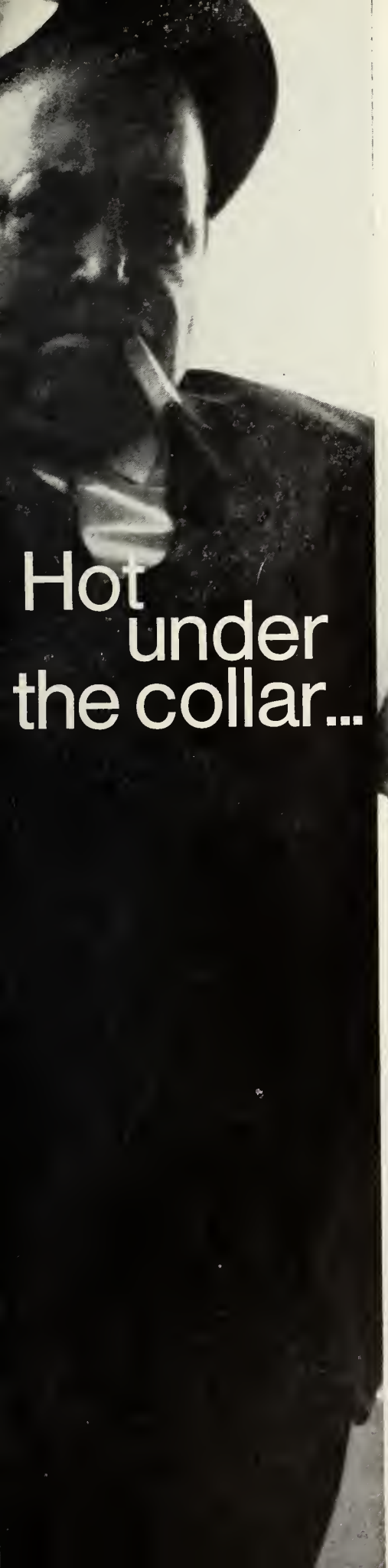
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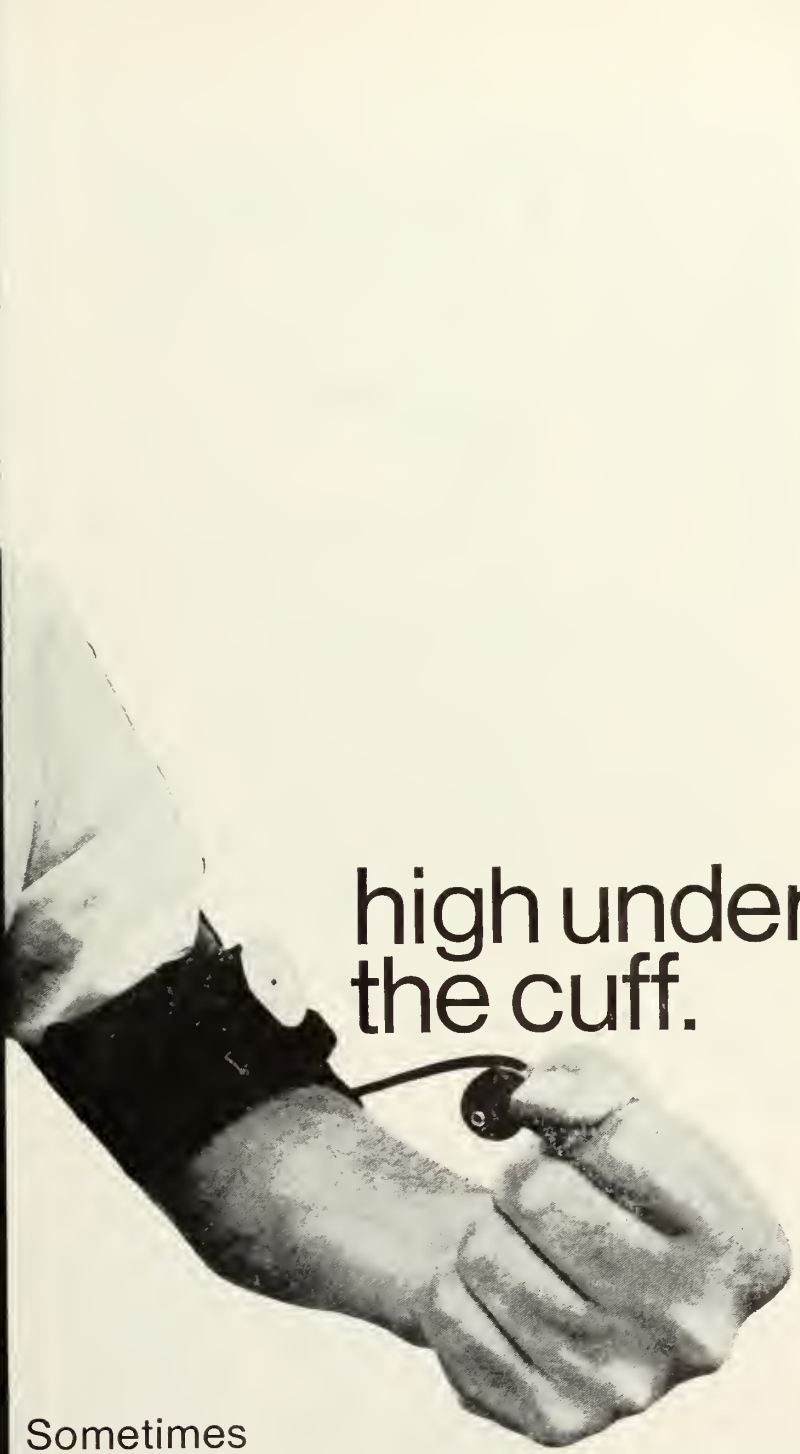
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high under the cuff.

Sometimes
he forgets he has hypertension, gets hot under the collar...high under the cuff.

For such patients, consider **Regroton®**

chlorthalidone	50 mg.
reserpine U.S.P.	0.25 mg.

To lower blood pressure
and allay anxiety in hypertension.

For brief summary of prescribing information, see next page.

RE-6392

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Geigy

chlorthalidone 50 mg.
reserpine U.S.P. 0.25 mg.

the once-a-day tablet for anxious hypertensives

Regroton is a combination of two basic antihypertensives designed to lower blood pressure and allay anxiety in hypertension. With Regroton he can keep his shirt on and you can keep his blood pressure down.

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Each tablet contains:
chlorthalidone 50 mg.
reserpine U.S.P. 0.25 mg

Indications: Hypertension.
Contraindications: History of mental depression, hypersensitivity, and most cases of severe renal or hepatic diseases.
Warning: With the administration of enteric-coated potassium supplements, which should be used only when adequate dietary supplementation is not practical, the possibility of small-bowel lesions (obstruction, hemorrhage, and perforation) should be kept in mind. Surgery for these lesions has frequently been required and deaths have occurred. Discontinue coated potassium-containing formulations immediately if abdominal pain, distention, nausea, vomiting, or gastrointestinal bleeding occur. Discontinue one week before electroshock therapy, and if depression or peptic ulcer occurs.
Use in pregnancy: Because chlorthalidone may cross the placental barrier and appear in cord blood and thiazides may appear in breast milk, this drug should be used with care in pregnant patients and nursing mothers. When used in women of childbearing age, the potential benefits of the drug should be weighed against the possible hazards to the fetus. Use of chlorthalidone may result in fetal or neonatal jaundice, thrombocytopenia, and possibly other adverse reactions which have occurred in the adult. Increased respiratory secretions, nasal congestion, cyanosis and anorexia may occur in infants born to reserpine-treated mothers.
Precautions: Antihypertensive therapy with this drug should always be initiated cautiously in postsympathectomy patients and in patients receiving ganglionic blocking agents, other potent antihypertensive drugs, or curare. Reduce dosage of concomitant antihypertensive agents by at least one-half. To avoid hypotension during surgery, discontinue therapy with this agent two weeks prior to elective surgical procedures. In emergency surgery, use, if needed, anticholinergic or adrenergic drugs or other supportive measures as indicated. Because of the possibility of progression of renal damage, periodic kidney function tests are indicated. Discontinue if the BUN rises or liver dysfunction is aggravated. Hepatic coma may be precipitated. Electrolyte imbalance, sodium and/or potassium depletion may occur. If potassium depletion should occur during therapy, the drug should be discontinued and potassium supplements given, provided the patient does not have marked oliguria.
Take particular care in cirrhosis or severe ischemic heart disease and in patients receiving corticosteroids, ACTH, or digitalis. Severe salt restriction is not recommended. Use cautiously in patients with ulcerative colitis or gallstones (biliary colic may be precipitated). Bronchial asthma may occur in susceptible patients.
Adverse Reactions: The drug is generally well tolerated. The most frequent side effects are nausea, gastric irritation, vomiting, diarrhea, constipation, muscle cramps, headache, dizziness and acute gout. Other potential side effects include angina pectoris, anxiety, depression, bradycardia and ectopic cardiac rhythms (especially when used with digitalis), drowsiness, dull sensorium, hyperglycemia and glycosuria, hyperuricemia, lassitude, restlessness, transient myopia, impotence or dysuria, orthostatic hypotension which may be potentiated when chlorthalidone is combined with alcohol, barbiturates or narcotics, leukopenia, aplastic anemia, skin rashes, thrombocytopenia, agranulocytosis, nasal stuffiness, increased gastric secretions, nightmare, purpura, urticaria, ecchymosis, weakness, uveitis, optic atrophy and glaucoma, and pruritus. Eruptions and/or flushing of the skin, a reversible paralysis agitans-like syndrome, blurred vision, conjunctival injection, increased susceptibility to colds, dyspnea, weight gain, decreased libido, dryness of the mouth, deafness, anorexia, and pancreatitis when epigastric pain or unexplained G.I. symptoms develop after prolonged administration. Jaundice, xanthopsia, paresthesia, photosensitization and necrotizing angiitis are possible.
Average Dosage: One tablet daily with breakfast.
Availability: Pink, single-scored tablets in bottles of 100 and 1000.
(B)46-600-C
For details, please see complete prescribing information.

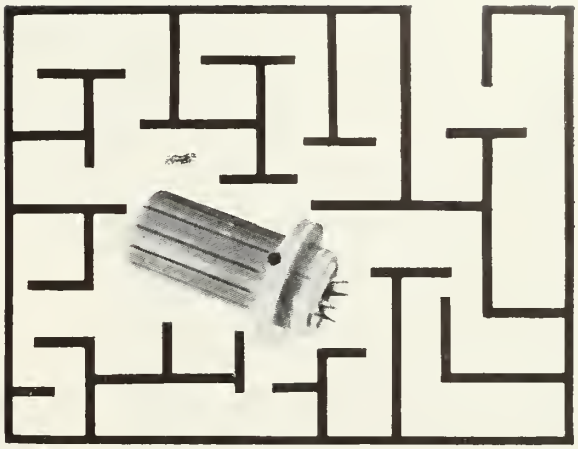
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Histoplasmosis can mimic such unrelated diseases as TB, leukemia, pneumonia and syphilis. Use the blue Histoplasmin LEDERTINE™ Applicator as the first step in differential diagnosis and as a routine step in physical examinations for the permanent records of your patients.

HISTOPLASMIN, TINE TEST
(Rosenthal)

Precautions—Nonspecific reactions are rare, but may occur. Vesiculation, ulceration or necrosis may occur at test site in highly sensitive persons. The test should be used with caution in patients known to be allergic to acacia, or to thimerosal (or other mercurial compounds).

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AN ANCHOR TO WINDWARD



Help the Needy!

This patient may appear to "have everything" but, like so many people getting along in years, she may well be in need—*medically*. Though there is no evidence of organic disease, she does have symptoms (fatigue, vague aches and pains, malaise) that may be indicative of—

a need to maintain anabolic balance... to counteract declining gonadal hormone secretion and forestall premature degenerative changes related to estrogen deficiency;

a need for mood elevation... to impart a gentle emotional uplift;

a need for nutritional supplementation... to compensate for the poor eating habits and subsequent dietary insufficiency of so many older people.

For these needs, consider MEDIATRIC for your next "needy" patient... medically.

MEDIATRIC provides specific agents to fulfill a need in the three areas:

1. **Gonadal steroids** [PREMARIN® (conjugated estrogens-equine), an orally active, natural estrogen, and methyltestosterone] for physiologic and metabolic benefits.

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tablets • capsules • liquid

Steroid-nutritional compound

	Each MEDIATRIC® Tablet or Capsule contains:	Each 15 cc. (3 teaspoonfuls) of MEDIATRIC® Liquid contains:
Conjugated estrogens-equine (PREMARIN®)	0.25 mg.	0.25 mg.
Methyltestosterone	2.5 mg.	2.5 mg.
Methamphetamine HCl	1.0 mg.	1.0 mg.
Cyanocobalamin	2.5 mcg.	1.5 mcg.
Intrinsic factor concentrate	8.0 mg.	—
Thiamine HCl	—	5.0 mg.
Thiamine mononitrate	10.0 mg.	—
Riboflavin	5.0 mg.	—
Niacinamide	50.0 mg.	—
Pyridoxine HCl	3.0 mg.	—
Calcium pantothenate	20.0 mg.	—
Ferrous sulfate exsic.	30.0 mg.	—
Ascorbic acid	100.0 mg.	—
		Contains 15% alcohol† †Some Loss Unavoidable.

Contraindication: Carcinoma of the prostate, due to methyltestosterone component.

Warning: Some patients with pernicious anemia may not respond to treatment with the Tablets or Capsules, nor is cessation of response predictable. Periodic examinations and laboratory studies of pernicious anemia patients are essential and recommended.

Side Effects: In addition to withdrawal bleeding, breast tenderness or hirsutism may occur.

Suggested Dosages: *Male and female*—1 Tablet or Capsule, or 3 teaspoonfuls Liquid, daily or as required.

In the female: To avoid continuous stimulation of breast and uterus, cyclic therapy is recommended (3 week regimen with 1 week rest period—Withdrawal bleeding may occur during this 1 week rest period).
In the male: A careful check should be made on the status of the prostate gland when therapy is given for protracted intervals.

Supplied: No. 752—MEDIATRIC Tablets, in bottles of 100 and 1,000.
No. 252—MEDIATRIC Capsules, in bottles of 30, 100, and 1,000.
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Solfoton

Sedation without peaks and valleys

REMOVES THE MENTAL BLUR
THAT CLOUDS VISION

CONSTRUCTIVE THERAPY—Solfoton in any form taken at 6 hour intervals maintains sedation at the threshold of calmness, sustaining a mental climate for purposeful living.

Each tablet or capsule contains:

PHENOBARBITAL (Warning: may be habit forming) ... 16 mg.
BENSULFOID® (See P.D.R.) ..... 65 mg.

Precaution: same as 16 mg. phenobarbital

Literature and clinical supply available to physicians.

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100s, 500s, 5000s

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SUBTLE SEDATION

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With the broad Polycillin (ampicillin trihydrate) spectrum...



...you have a lot going for you in the wide range of bacterial infections.

PRESCRIBING INFORMATION. For complete information consult Official Package Circular.
Indications: Infections due to susceptible strains of Gram-negative bacteria (including Shigellae, *S. typhosa* and other Salmonellae, *E. coli, H. influenzae, P. mirabilis, N. gonorrhoeae* and *N. meningitidis*) and Gram-positive bacteria (including streptococci, pneumococci and nonpenicillinase-producing staphylococci).
Contraindications: A history of allergic reactions to penicillins or cephalosporins and infections due to penicillinase-producing organisms.
Precautions. Typical penicillin-allergic reactions may occur, especially in hypersensitive patients. Mycotic or bacterial superinfections may occur. Experience in newborn and premature infants is limited and caution should be used in treatment, with frequent organ function evaluations. Safety for use in pregnancy is not established. In gonorrheal therapy, serologic tests for syphilis should be performed initially and monthly for 4 months. Assess renal, hepatic and hematopoietic function intermittently during long-term therapy.
Adverse Reactions: Skin rash, pruritus, urticaria, nausea, vomiting, diarrhea and anaphylactic reactions. Mild transient elevations of SGOT or SGPT have been noted. Black tongue has been noted in some patients receiving the Chewable Tablets.
Usual Dosage: Adults—250 or 500 mg. q. 6 h. (according to infection site and offending organisms). Children—50-100 mg./Kg./day in 3 to 4 divided doses (depending on infection site and offending organisms). Bacterial meningitis—150-200 mg./Kg./day in 6 to 8 divided doses. Children weighing more than 20 Kg. should be given an adult dose when prescribing orally. In parenteral administration, children weighing more than 40 Kg. should be given an adult dose. Beta-hemolytic streptococcal infections should be treated for at least 10 days.
Supplied: Capsules—250 mg. in bottles of 24 and 100. 500 mg. in bottles of 16 and 100. For Oral Suspension—125 mg./5 ml. in 60, 80 and 150 ml. bottles. 250 mg./5 ml. in 80 and 150 ml. bottles. Chewable Tablets—125 mg. in bottles of 40. Injectable—for I.M./I.V. use—vials of 125 mg., 250 mg., 500 mg., and 1 Gm. Pediatric Drops—100 mg./ml. in 20 ml. bottles.
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Polycillin®
(ampicillin trihydrate)

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The penicillin you use like a broad-spectrum antibiotic

now she can cope...

thanks to

Butisol SODIUM®
(SODIUM BUTABARBITAL)

the "daytime sedative" for everyday situational stress

When stress is situational—environmental pressure, worry over illness—the treatment often calls for an anxiety-allaying agent which has a prompt and predictable calming action and is remarkably well tolerated. BUTISOL SODIUM (sodium butabarbital) meets this therapeutic need.

After 30 years of clinical use . . . still a first choice among many physicians for dependability, safety and economy in mild to moderate anxiety.

Contraindications: Porphyria or sensitivity to barbiturates.

Precautions: Exercise caution in moderate to severe hepatic disease. Elderly or debilitated patients may react with marked excitement or depression.

Adverse Reactions: Drowsiness at daytime sedative dose levels, skin rashes, "hangover" and systemic disturbances are seldom seen.

Warning: May be habit forming.

Usual Adult Dosage: As a daytime sedative, 15 mg. (¼ gr.) to 30 mg. (½ gr.) t.i.d. or q.i.d.

Available for daytime sedation: Tablets, 15 mg. (¼ gr.), 30 mg. (½ gr.); Elixir, 30 mg. per 5 cc. (alcohol 7%).

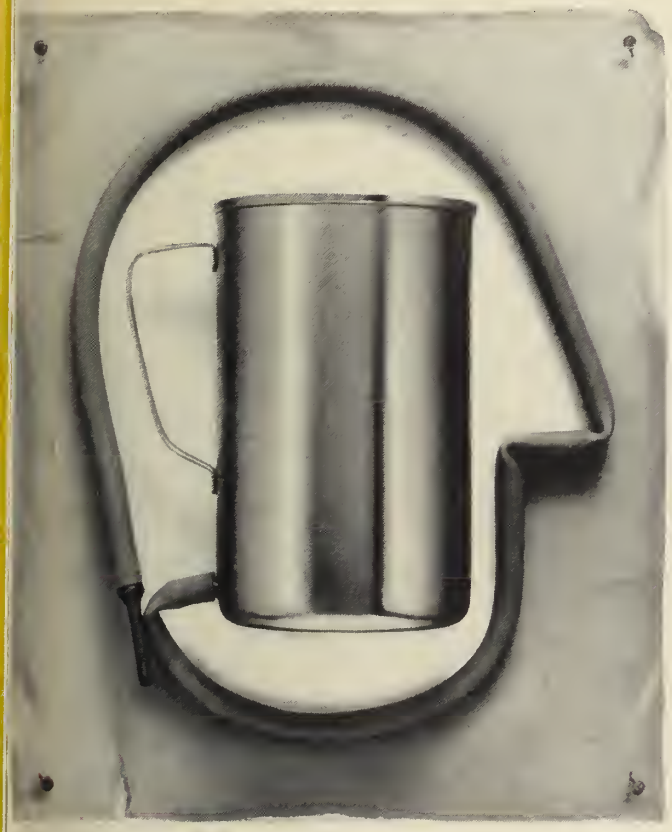
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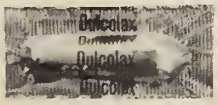
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Dulcolax tablets taken at night usually result in a bowel movement the following morning. A combination of tablets at night and a suppository the next morning generally cleans the bowel thoroughly in preparation for surgery or special procedures. Keep in mind, however, that the drug is contraindicated in the acute surgical abdomen.

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DU-6118

this ulcer did not heal...until its surface was cleared of dead tissue and debris



FIRST APPLICATION
ELASE Ointment is applied to a deep ulceration of a finger.

EIGHTEEN DAYS LATER
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to aid in debridement to facilitate healing in chronic cutaneous ulcers...

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(fibrinolysin and desoxyribonuclease, combined, [bovine] ointment)

PARKE-DAVIS

By helping to remove dead tissue and debris from the ulcer's surface, ELASE Ointment creates a better environment for the elimination of infection, for healthy granulation...*for healing.* Its lytic enzymes effectively break down DNA in dead leukocytes and other debris...the fibrin in blood clots, serum, and purulent exudates...and the denatured proteins in necrotic tissue. Protein elements of *living* tissue are relatively unaffected. ELASE Ointment is indicated in stasis ulcers and in other infected or inflamed ulcers caused by circulatory disturbances. In cases requiring skin grafting, it is used preoperatively for debridement. For ambulatory patients debridement with ELASE Ointment is a convenient therapy and a regimen likely to be followed. *Precautions:* Observe usual precautions against allergic reactions, particularly in persons with a history of sensitivity to materials of bovine origin or to mercury compounds. *Adverse Reactions:* Side effects attributable to the enzymes have not been a problem at the dose and for the indications recommended. *Discussion:* Successful use of enzymatic debridement depends on several factors: (1) dense, dry eschar, if present, should be removed surgically before enzymatic debridement is attempted; (2) the enzyme must be in constant contact with the substrate; (3) accumulated necrotic debris must be periodically removed; (4) the enzyme must be replenished at least once daily; and (5) secondary closure or skin grafting must be employed as soon as possible after optimal debridement has been attained. It is further essential that wound-dressing techniques be performed carefully under aseptic conditions and that appropriate systemically acting antibiotics be administered concomitantly if, in the opinion of the physician, they are indicated. *Available:* ELASE Ointment is supplied in 30-Gm. tubes containing 30 units (Loomis) of fibrinolysin and 20,000 units of desoxyribonuclease with 0.12 mg. thimerosal (mercury derivative); and in 10-Gm. tubes containing 10 units of fibrinolysin and 6,666 units of desoxyribonuclease with 0.04 mg. thimerosal. ELASE Ointment has a special base of liquid petrolatum and polyethylene; contains sodium chloride and sucrose used during manufacture; is stable at room temperature through the expiration date stated on the package.

Parke, Davis & Company, Detroit, Michigan 48232

PARKE-DAVIS

48158

The AMBAR SCRAPBOOK of Obesity Oddities
FACT & LEGEND



CONTROL FOOD AND MOOD ALL DAY LONG WITH A SINGLE MORNING DOSE

AMBAR #2 EXTENTABS®

methamphetamine HCl 15 mg., phenobarbital 64.8 mg. (1 gr.) (Warning: may be habit forming).

One Ambar Extentab before breakfast can help control most patients' appetite for up to 12 hours. Methamphetamine, the appetite suppressant, gently elevates mood and helps overcome dieting frustrations. Phenobarbital, the sedative in Ambar, controls irritability and anxiety...helps maintain a state of mental calm and equanimity. Both work together to ease the tensions that erode the willpower during periods of dieting.

Also available: Ambar #1 Extentabs®—methamphetamine hydrochloride 10 mg., phenobarbital 64.8 mg. (1 gr.) (Warning: may be habit forming).

BRIEF SUMMARY/**Indications:** Ambar suppresses appetite and helps offset emotional reactions to dieting. **Contraindications:** Hypersensitivity to barbiturates or sympathomimetics; patients with advanced renal or hepatic disease. **Precautions:** Administer with caution in the presence of cardiovascular disease or hypertension. **Side Effects:** Nervousness or excitement occasionally noted, but usually infrequent at recommended dosages. Slight drowsiness has been reported rarely. See package insert for further details.

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from the discord of anxiety...



to emotional harmony

with the aid of antianxiety

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(chlordiazepoxide HCl)
5-mg, 10-mg and 25-mg capsules

In an age of swift change and challenge, susceptible individuals may experience varying degrees of excessive anxiety. The resulting emotional stress may precipitate significant functional disorders or complicate existing organic disease. In properly individualized maintenance dosage, Librium (chlordiazepoxide HCl) quickly helps relieve anxiety and apprehension, provides useful adjunctive therapy in psychophysiologic disorders—yet seldom impairs mental acuity or ability to function. Librium has demonstrated a wide margin of safety in short- and long-term therapy.

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Libritabs®
(chlordiazepoxide)

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Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

Before prescribing, please consult complete product information, a summary of which follows:
Indications: Indicated when anxiety, tension and apprehension are significant components of the clinical profile.
Contraindications: Patients with known hypersensitivity to the drug.
Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards.
Precautions: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.
Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

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17 JUN 1969

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of
The Maine Medical Association

VOLUME 60 JUNE, 1969 NUMBER 6

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VENTRICULAR TACHYCARDIA INDUCED BY CAROTID SINUS STIMULATION 135
Oscar A. Matthews, M.D., Hanover, N.H.

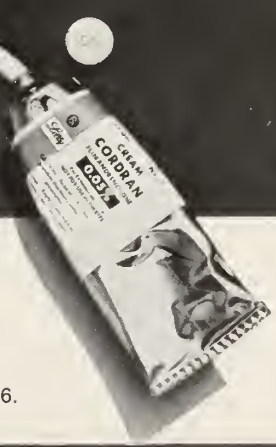
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Ovid F. Pomerleau, M.D. and Harald J. Schwarz, M.D., Ph.D., Waterville, Me.

"MEDICINE AND SOCIETY" 140
Senator Edmund S. Muskie, Waterville, Me.

Continued on Page IV

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References:
(1) Siver, R. H.: CMD, *21*:109, September 1954. (2) Frykman, H. H.: Minn. Med., *38*:19-27, January 1955. (3) McGivney, J.: Tex. State Jour. Med., *51*:16-18, January 1955. (4) Quehl, T. M.: Jour. of Florida Acad. Gen. Prac., *15*:15-16, October 1965. (5) Weekes, D. J.: N.Y. State Jour. Med., *58*:2672-2673, August 1958. (6) Weekes, D. J.: EENT Digest, *25*:47-59, December 1963. (7) Abbott, P. L.: Jour. Oral Surg., Anes., & Hosp. Dental Serv., 310-312, July 1961. (8) Rapoport, L. and Levine, W. I.: Oral Surg., Oral Med. & Oral Path., *20*:591-593, November 1965.

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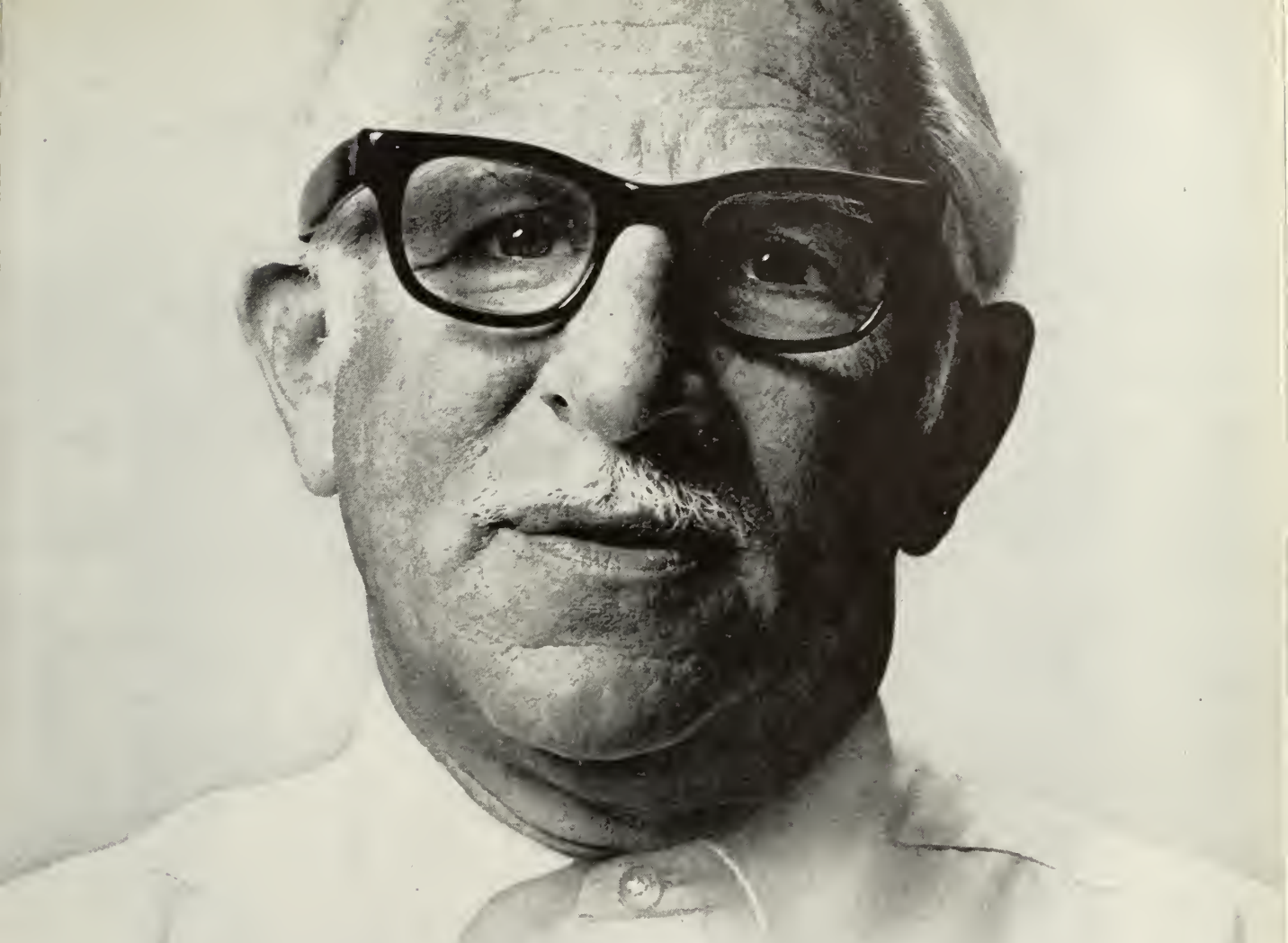
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Precautions: Overgrowth of nonsusceptible organisms may occur. Constant observation is essential. If new infections appear, appropriate measures should be taken. In infants, increased intracranial pressure with bulging fontanels has been observed. All signs and symptoms have disappeared rapidly upon cessation of treatment.

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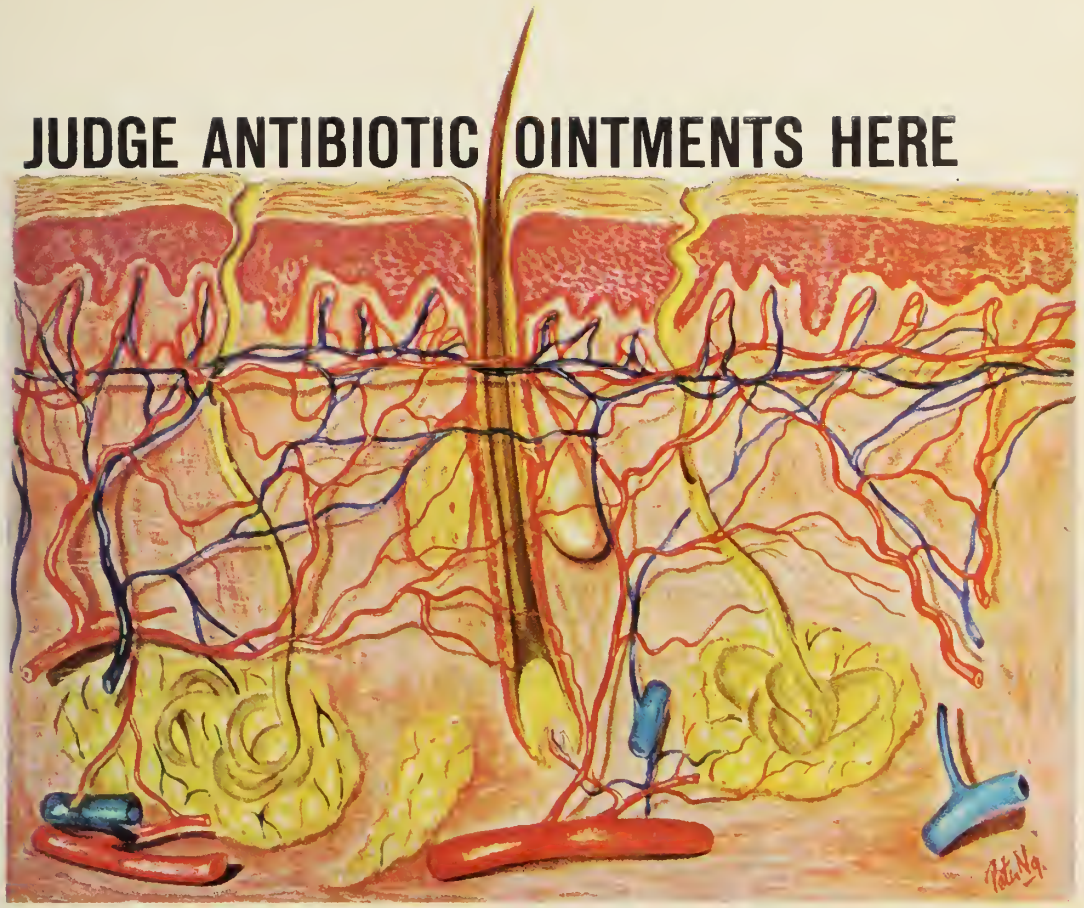
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CONTRAINDICATIONS: Patients with glaucoma; prostatic hypertrophy and benign bladder neck obstruction; known hypersensitivity to chlordiazepoxide HCl and/or clidinium bromide.

WARNINGS: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering Librium (chlordiazepoxide hydrochloride) to known addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards. As with all anticholinergic drugs, an inhibiting effect on lactation may occur.

PRECAUTIONS: In elderly and debilitated, limit dosage to smallest effective amount to preclude development of ataxia, oversedation or confusion (not more than two capsules per day initially; increase gradually as needed and toler-

or here.



ated). Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (*e.g.*, excitement, stimulation and acute rage) have been reported in psychiatric patients. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

ADVERSE REACTIONS: No side effects or manifestations not seen with either compound alone have been reported with Librax. When chlordiazepoxide hydrochloride is used alone, drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally with chlordiazepoxide hydrochloride, making periodic blood counts and liver-function tests advisable during protracted therapy. Adverse effects reported with Librax are typical of anticholinergic agents, *i.e.*, dryness of mouth, blurring of vision, urinary hesitancy and constipation. Constipation has occurred most often when Librax therapy is combined with other spasmolytics, and/or low residue diet.

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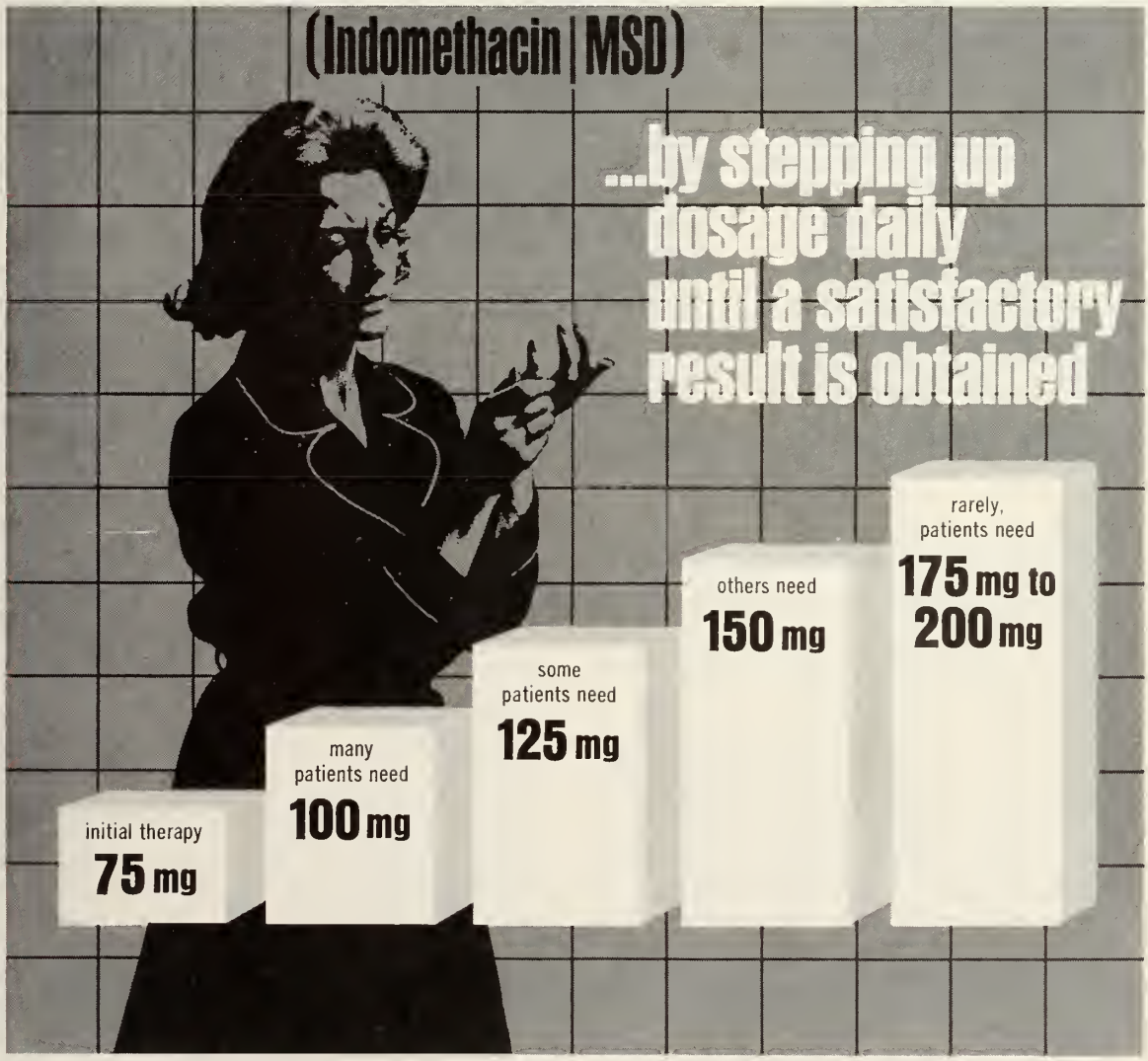
Indications: Dimetapp is indicated for symptomatic relief of the allergic manifestations of respiratory illnesses, such as the common cold and bronchial asthma, seasonal allergies, sinusitis, rhinitis, conjunctivitis, and otitis.
Contraindications: Hypersensitivity to antihistamines. Not recommended for use during pregnancy.
Precautions: Until patient's response has been determined, he should be cautioned against engaging in operations requiring alertness. Administer with care to patients with cardiac or peripheral vascular diseases or hypertension.
Side Effects: Hypersensitivity reactions including skin rashes, urticaria, hypotension and thrombocytopenia, have been reported on rare occasions. Drowsiness, lassitude, nausea, giddiness, dryness of the mouth, mydriasis, increased irritability or excitement may be encountered.
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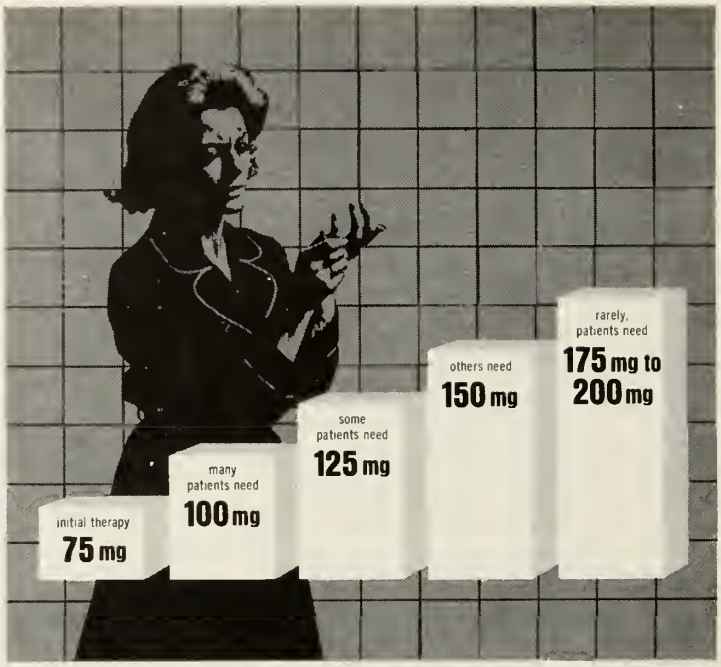
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Contraindications: INDOCIN may mask the signs and symptoms of peptic ulcer and may itself cause peptic ulceration or irritation of the G.I. tract. For these reasons it should not be given to patients with active peptic ulcer, gastritis, regional enteritis, or ulcerative colitis (use with caution if there is history of these disorders); aspirin-sensitive asthmatics. Safe use during pregnancy or during lactation has not been established. Should not be prescribed for children because safe conditions for use have not been established. In a few cases of severe juvenile rheumatoid arthritis receiving INDOCIN along with other drugs, severe reactions, including fatalities, have been reported.

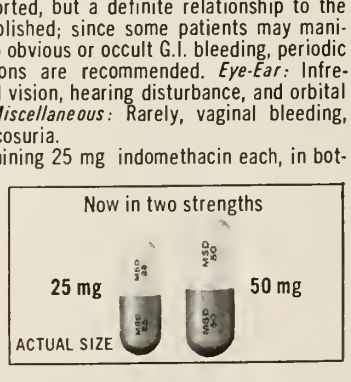
Warnings: Patients who experience dizziness, lightheadedness, or feelings of detachment on INDOCIN should be cautioned against operating motor vehicles or machinery, climbing ladders, etc. Use cautiously in patients with psychiatric disturbances, epilepsy, or parkinsonism since it may aggravate these conditions.

Precautions: Use cautiously in patients with a history of peptic ulcer, gastritis, regional ileitis, or ulcerative colitis because of its potential for causing G.I. bleeding. May cause single or multiple ulceration of the esophagus, stomach, duodenum, or small intestine, and, in a few instances, severe bleeding and perforation with a few fatalities have been reported. May potentiate the ulcerogenic effect of steroids, salicylates, or phenylbutazone. Gastrointestinal bleeding with no obvious ulcer formation has also been noted; the drug should be discontinued if G.I. bleeding occurs. As a result of obvious or occult G.I. bleeding, some patients may manifest anemia, and for this reason periodic hemoglobin determinations are recommended. G.I. effects may be minimized by giving the drug with food or with antacids or immediately after meals. In common with other drugs that have anti-inflammatory, analgesic, and antipyretic properties, indomethacin may mask the signs and symptoms of infection; avoid undue delay in initiating appropriate treatment of the infection; use cautiously in patients with existing, but controlled, infections. As with any new drug, patients should be followed carefully to detect unusual manifestations of drug sensitivity.

Adverse Reactions: Starting therapy with low doses, with gradual increases when necessary, will minimize adverse reactions. *Central Nervous System:* Most commonly, headache (usually more severe in morning), dizziness, and lightheadedness; infrequently observed reactions include mental confusion, drowsiness, convulsions, coma, depression, and other psychic disturbances, such as depersonalization; CNS effects are often transient and frequently disappear with continued treatment or reduced dosage. The severity of these effects may occasionally require cessation of therapy. *Gastrointestinal:* Most commonly, nausea, anorexia, vomiting, epigastric distress, abdominal pain, and diarrhea; others that may develop are ulceration, single or multiple, of esophagus, stomach, duodenum, or small intestine, including perforation and hemorrhage with a few fatalities having been reported; G.I. bleeding without obvious ulcer formation, increased abdominal pain in patients with preexisting ulcerative colitis; less commonly, stomatitis; gastritis; bleeding from the sigmoid colon, occult in type or from a diverticulum, and perforation of preexisting sigmoid lesions (diverticulum, carcinoma); G.I. reactions not known definitely to be attributable to indomethacin include development of ulcerative colitis and of regional ileitis. *Hepatic:* Rarely, jaundice and hepatitis. *Cardiovascular-Renal:* Infrequently, edema, elevation of blood pressure, and hematuria. *Dermatologic-Hypersensitivity:* Infrequently, pruritus, urticaria, angioneurotic edema, angiitis, skin rashes, loss of hair, and acute respiratory distress including sudden dyspnea and asthma. *Hematologic:* Infrequently, leukopenia, purpura, and thrombocytopenia; rarely, agranulocytosis and bone marrow depression have been reported, but a definite relationship to the drug has not been established; since some patients may manifest anemia secondary to obvious or occult G.I. bleeding, periodic hemoglobin determinations are recommended. *Eye-Ear:* Infrequently, tinnitus, blurred vision, hearing disturbance, and orbital and periorbital pain. *Miscellaneous:* Rarely, vaginal bleeding, hyperglycemia, and glycosuria.

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Indications: For relief of depression.
Contraindications: Do not use drugs of the M.A.O.I. class with Pertofrane. Hyperpyretic crises or severe convulsive seizures may occur; potentiation of adverse effects can be serious or even fatal. When substituting this drug in patients receiving an M.A.O.I., allow an interval of at least 7 days. Initial dosage in such patients should be low and increases should be gradual and cautiously prescribed.
Warning: Activation of psychosis may occasionally be observed in schizophrenic patients. Do not use in patients under 12 years old, and do not use in women who are or may become pregnant unless the clinical situation warrants the potential risk.
Precautions: Careful supervision and protective measures for potentially suicidal patients are necessary. Discontinuation of therapy or adjunctive use of a sedative or tranquilizer may be necessary in the presence of increased anxiety or agitation, hypomania or manic excitement. However, phenothiazines may aggravate the condition. Atropine-like effects may be more pronounced (e.g. paralytic ileus) in susceptible patients and in those receiving anticholinergic drugs (including antiparkinsonism agents). Carefully observe patients with increased intraocular pressure. Prescribe cautiously in hyperthyroid patients and in those receiving thyroid medications. Cardiovascular complications (myocardial infarction and arrhythmias) are potential risks since they have occasionally occurred with imipramine, the parent compound. Desipramine may block the pharmacologic activity of guanethidine and related adrenergic neuron-blocking agents. Hypertensive episodes have been observed during surgery in patients on desipramine therapy.
Before prescribing the drug, the physician should be thoroughly familiar with prescribing information, with the literature, with all adverse reactions, with the diagnosis and management of depression, and with the relative merits of all measures for treating the condition.
Adverse Reactions: Dry mouth, constipation, disturbed visual accommodation, anorexia, perspiration, insomnia, drowsiness, dizziness, headache, nausea, epigastric distress, and skin rash (including photosensitization) may appear. Since orthostatic hypotension has occurred, carefully observe patients requiring concomitant vasodilating therapy, particularly during the initial phases. Other adverse reactions include tachycardia, changes in EEG patterns, tremor, falling, mild extrapyramidal activity, neuromuscular incoordination, epileptiform seizures. A confusional state (with such symptoms as hallucinations and disorientation) occurs occasionally and may require reduced dosage or discontinuance of therapy. Rarely, transient eosinophilia, slight elevation in transaminase levels, transient jaundice, or liver damage have occurred. If abnormalities occur in liver function tests, discontinue drug and investigate. Occasional hormonal effects, particularly decreased libido or impotence and instances of gynecomastia, galactorrhea and female breast enlargement have been observed. Urinary frequency or retention may occur. The drug should be discontinued if agranulocytosis, bone marrow depression, jaundice, thrombocytopenia, or purpura occur.
Dosage: 25 to 50 mg. t.i.d. The maximum daily dose is 200 mg. Continue maintenance dosage for at least 2 months after obtaining satisfactory response. Generally, elderly and adolescent patients should be given low doses.
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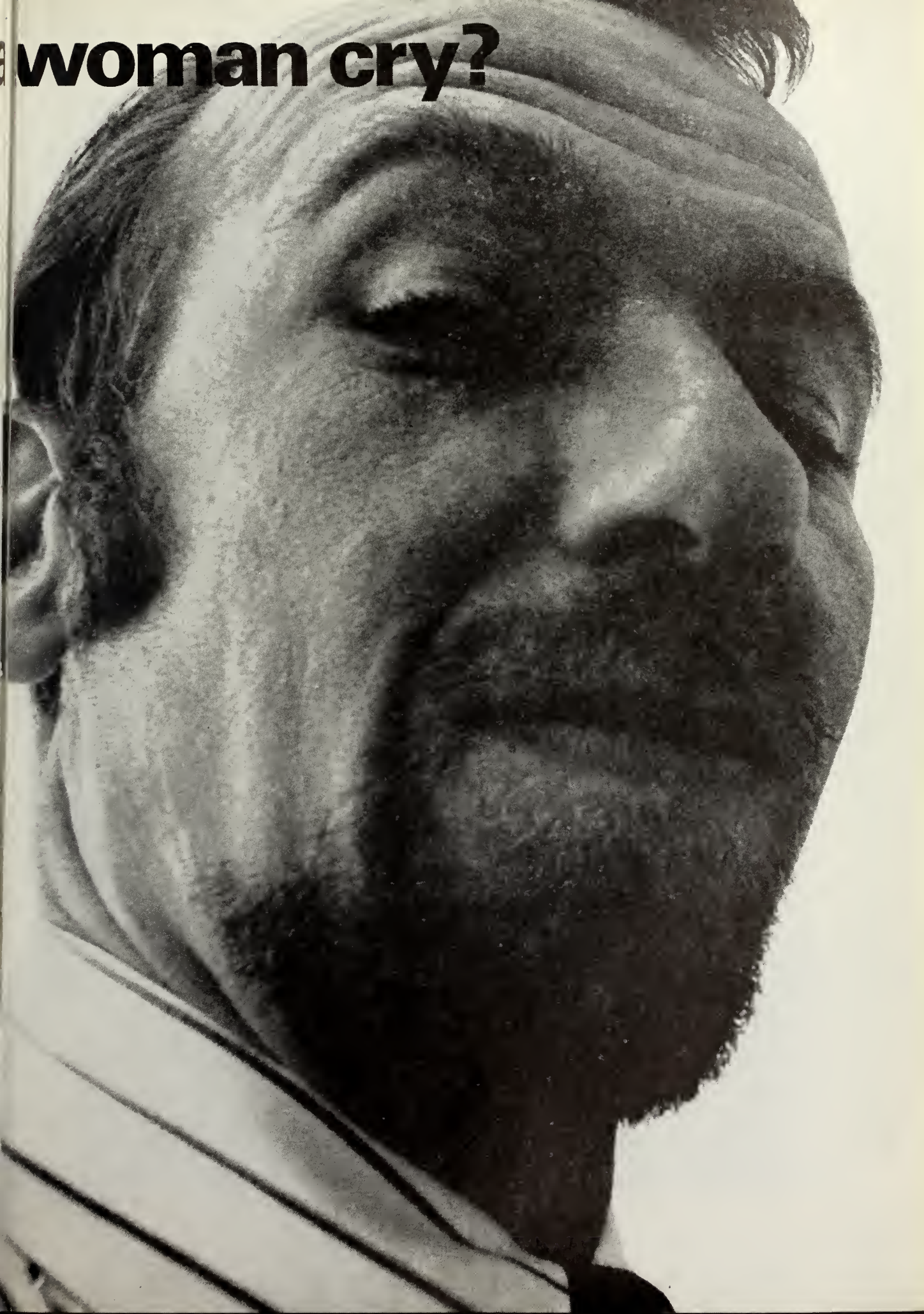
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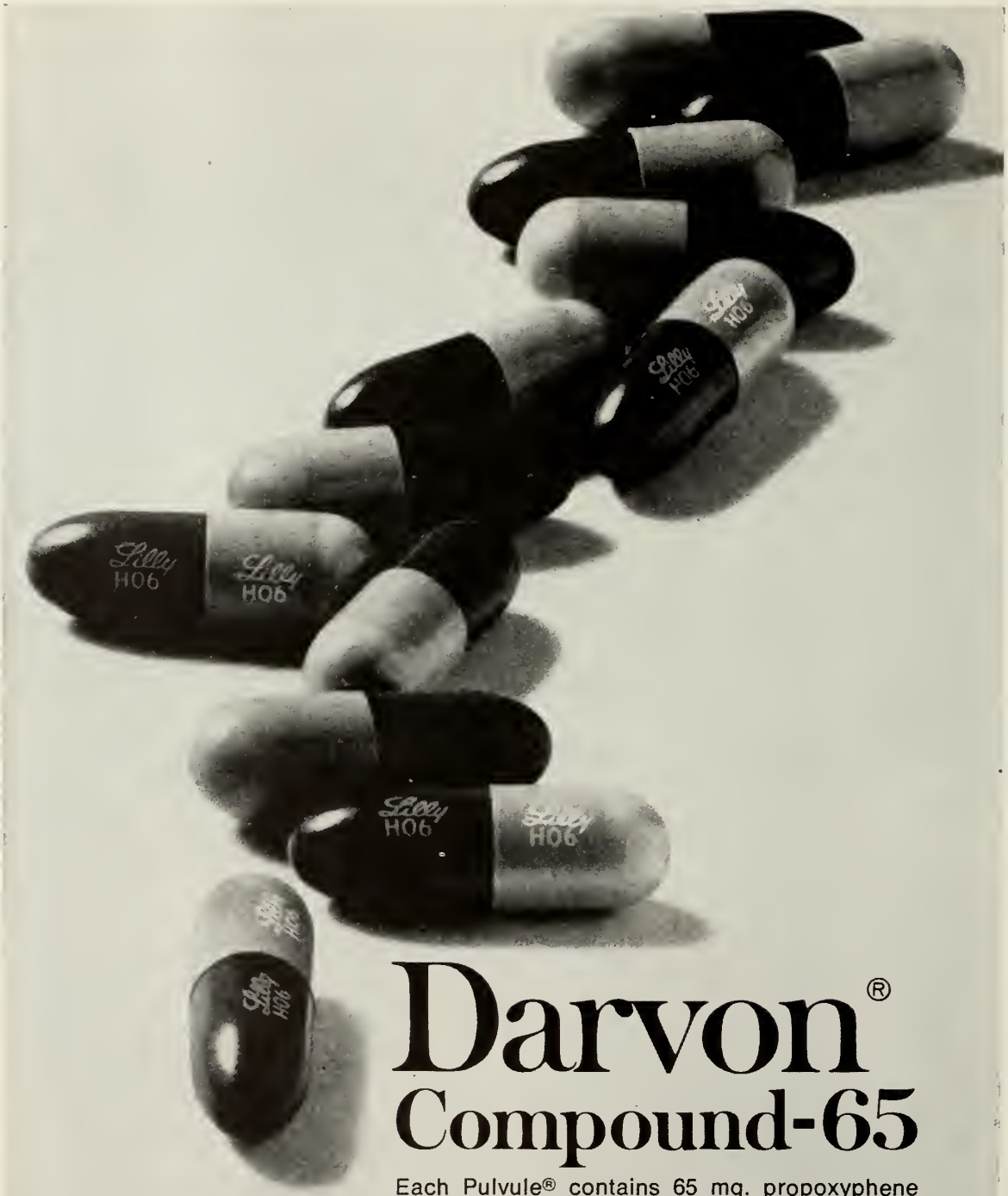
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The Journal
of the
Maine Medical Association

Volume Sixty | Brunswick, Maine, June, 1969 | Number 6

Ventricular Tachycardia Induced By Carotid Sinus Stimulation

Oscar A. Matthews, M.D.*

Stimulation of the carotid sinus can be highly helpful in diagnosing cardiac arrhythmias, in terminating an episode of paroxysmal supraventricular tachycardia and often in inducing relief of pain of coronary origin.[1] During the course of this test, however, unpleasant neurologic symptoms such as convulsion and syncope may transiently occur.[2] Furthermore, hemiplegia[3] and even death[4–8] have been reported as a result of this simple procedure. The present communication is an illustration of ventricular tachycardia which appeared during carotid sinus pressure.

Case Report

A 45-year-old housewife was seen with a history of sudden onset of rapid heart beating accompanied by tightness in the chest and lightheadedness. She had suffered a similar episode in the past which was treated with digitalis. There was no history of cardiopathy and she was taking no medications. On examination, the patient appeared very apprehensive with a regular pulse of 180 per minute. The heart tones were regular and rapid. The rest of the examination was unremarkable. An electrocardiogram (Fig. 1, initial portion of upper strip) showed a paroxysmal supraventricular tachycardia at 180 per minute. Carotid sinus massage, under continuous electrocardiographic monitoring, was subsequently carried out. Three runs of ventricular tachycardia were observed before sinus rhythm was reestablished. The patient was observed for two hours and discharged to the outpatient clinic for follow up.

Discussion

Ventricular tachycardia[9–11] or ventricular fibrillation[5–8] may be precipitated by reflex stimulation of the vagus in patients with paroxysmal supraventricular arrhythmias. This was also observed in a patient with complete heart block in whom episodes of ventricular tachycardia and fibrillation were induced by straining at stool or digital stimulation of the rectum.[12] The exact mechanism involved in the production of ventricular arrhythmias by carotid sinus stimulation is not clear. It is possible that acetylcholine liberated during vagal stimulation may reach the ventricles and by facilitating the appearance of after-potentials may induce ventricular arrhythmias.[13] Myocardial ischemia produced by long lasting supraventricular tachycardia may also contribute to ventricular irritability.

In order to avoid undesirable consequences, carotid sinus massage should only be done in patients in the recumbent position, under continuous electrocardiographic monitoring and for no more than five seconds on each side.[1] The maneuver should be terminated if ventricular ectopic beats or asystole occur. Whenever possible, the necessary equipment for cardiac resuscitation should be available.

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Acknowledgment

The author wishes to acknowledge Drs. Thomas P. Almy and Joseph L. Grant for their comments on this paper.

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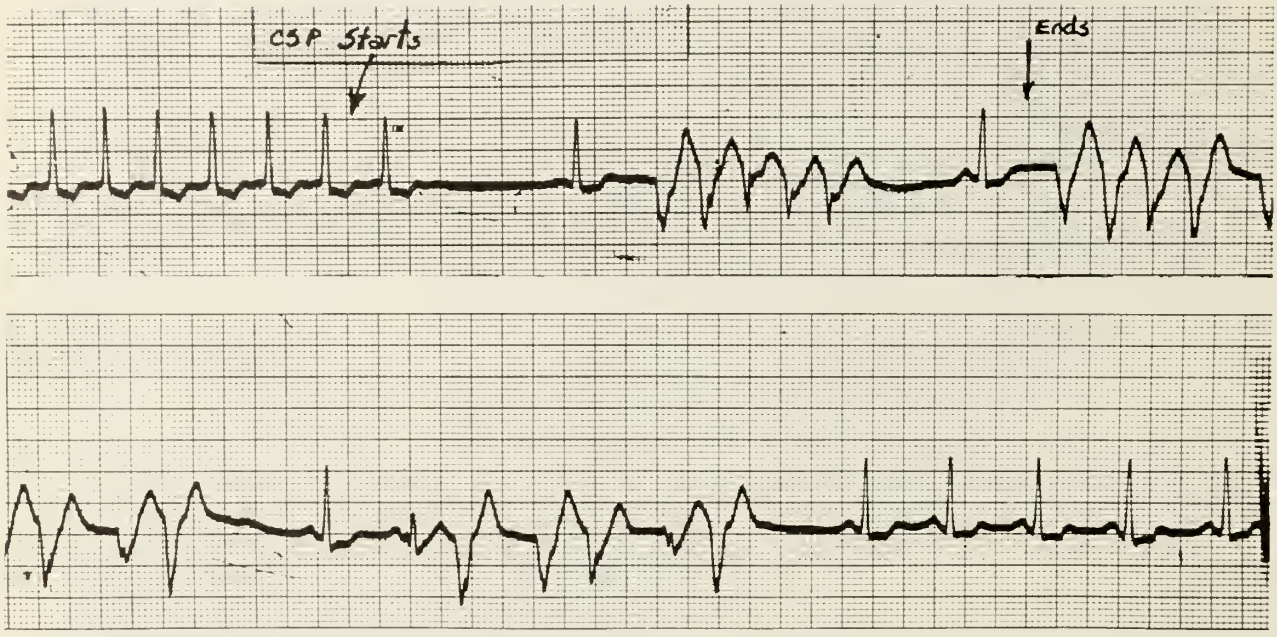


Fig. 1. (continuous tracing) Shows a paroxysmal supraventricular tachycardia followed by bouts of ventricular tachycardia after carotid sinus stimulation. The fifth complex on line two is a ventricular fusion beat which speaks in favor of the diagnosis of ventricular tachycardia. Sinus rhythm is reestablished at the end of the strip.

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Even Then

William Manning, a New England farmer, of North Billerica, Mass., wrote in 1797 in his "The Key of Liberty"

(published with notes and a foreword by Samuel Eliot Morrison by the Manning Association: Billerica, Mass., 1922)

"The Doctors have established their Meditial Societyes and have both their state and county Meetings, by which they have so nearly emielated Quacary of all kinds, that a poor man can't git so grate cures of them for a ginna, as he could fifty years ago of an old Squaw for halfe a pint of Rhum. The bisness of a Midwife could be performed fifty years ago for a halfe a dollar and now it costs a poor man five hole ones."

(The Mass Medical Society was incorporated in 1781—16 years before Manning wrote this.)

Tuberous Sclerosis With Unusual Findings

A Case Report

OVID F. POMERLEAU, M.D.* and HARALD J. SCHWARZ, M.D., Ph.D.**

In *The Journal of the Maine Medical Association,* Galindo et al[1] published a series of 8 cases of tuberous sclerosis and quote extensive literature. Their cases showed variation from the full blown typical "Tuberous Sclerosis Complex" of mental retardation, epilepsy, sebaceous adenoma and cerebral tubers to the formes frustes and involvement of many organs and anatomical sites.

This case deserves publication because of pathological findings of the heart which to our knowledge so far have not been observed.

CASE REPORT

R. R. T. is a retarded 6-year-old boy who was born at term without complication as the first of 3 siblings. The mother, father and 2 siblings are well and living and there is no case of mental retardation in the family.

*Department of Surgery, Elizabeth Ann Seton Hospital, Waterville, Maine.
**Department of Pathology, Elizabeth Ann Seton Hospital, Waterville, Maine.

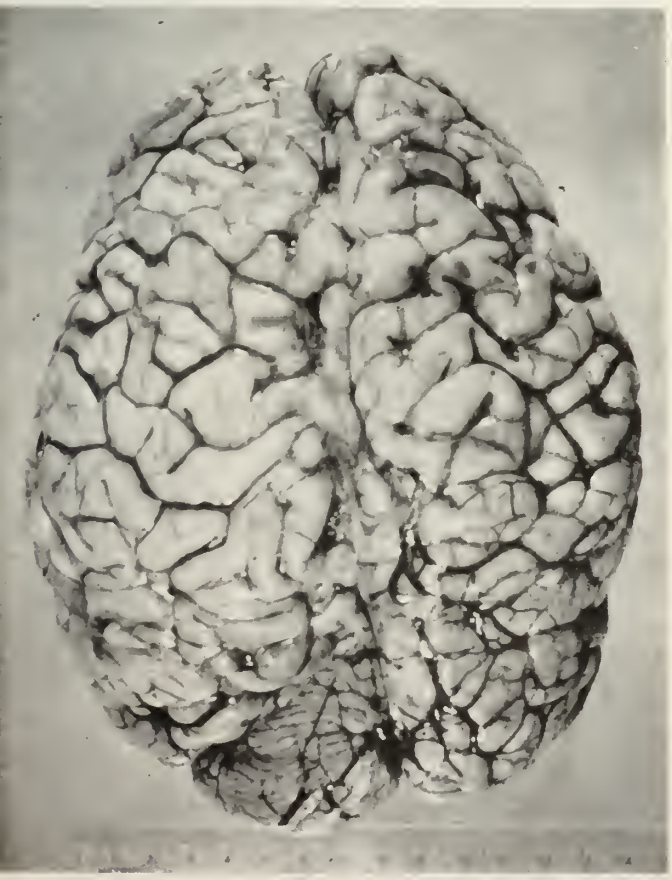


Fig. 1

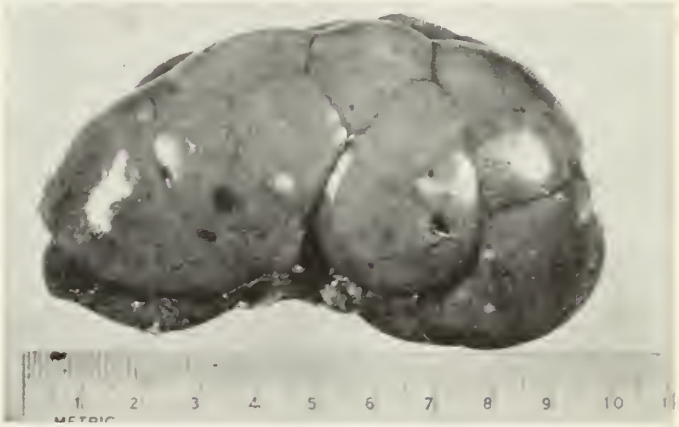


Fig. 2



Fig. 3

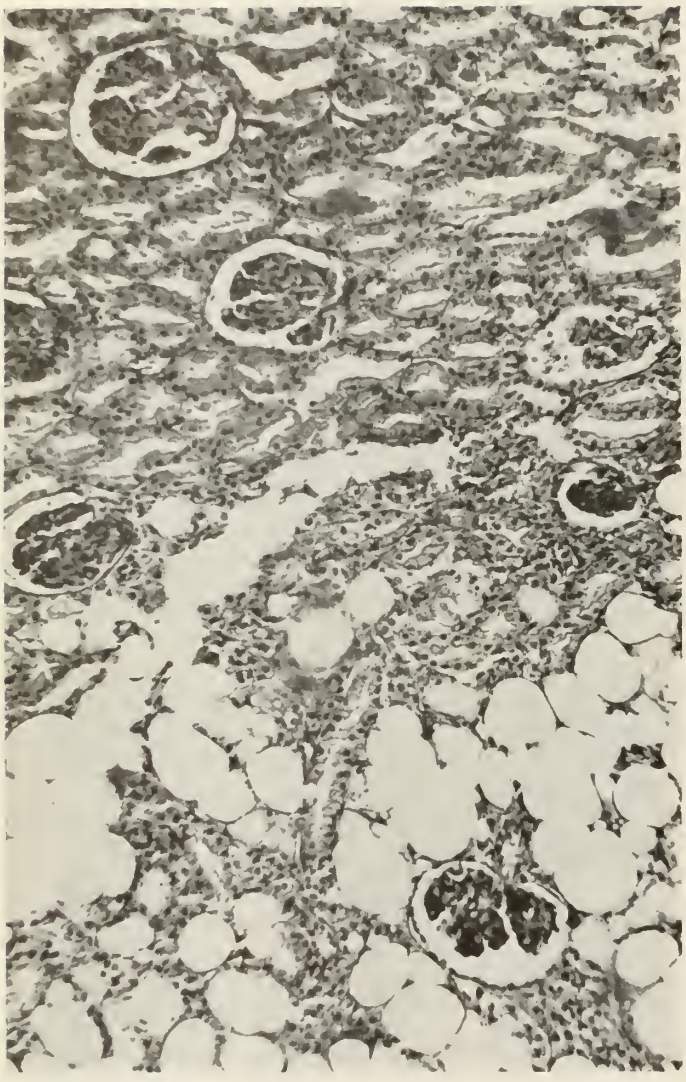


Fig. 4

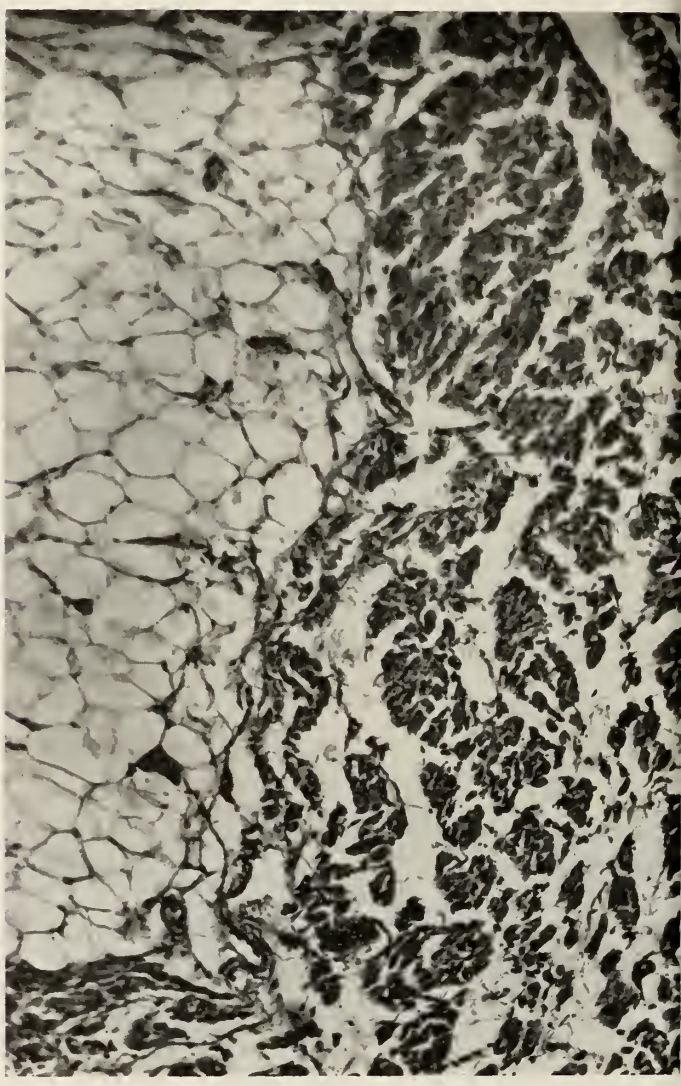


Fig. 5

As early as 2 weeks of age the infant started to stiffen up and would scream for hours and during the night, twitching of one eye, side of mouth, one arm and one leg on the same side of the body was observed by the mother. At the age of 4 months he was hospitalized and mild epileptic seizures were noted. After extensive studies, the diagnosis of "cryptogenic epilepsy" was made, but otherwise he was said to be normal. In spite of medication, Dilantin® and Phenobarbital, the epileptic seizures continued at home. Already at that time the mother suspected the child to be retarded.

At age 3 he was hospitalized for an acute pneumonia caused by a coilspring lodged in one of the major bronchi. An electroencephalogram was reported as normal. At age 3½ he had severe seizures with convulsions and he was hospitalized unconscious and cyanotic. At home after discharge he became restless and destructive; screaming, crying, hitting and throwing things around. Over the years his medication was increased to high doses of Phenobarbital. After 5 years he became less active, laying on the couch with his head low, not sleeping and staring at the floor. He understood fairly well if the mother spoke to him and obeyed commands. He did not speak, though at the age of 2 or 3 he could say a few words.

His last illness was an upper respiratory infection apparently contracted from his brothers. On the 4th day of his illness he developed a severe rash that resembled measles which changed on the 5th day into large purple blisters, involving lips and mouth.

On admission to the hospital, his rectal temperature was 106°F, pulse 100 and respiration 48. The eyes were swollen and the body covered with a blistering rash. Laboratory data were not contributory. He died in deep coma.

At autopsy the above mentioned skin lesions were found all over the body. The brain showed the typical tubers (Fig. 1). There were ovoid, pale gray tumors in the renal cortex (Fig. 2) and medulla and a similar mass that replaced the myocardium of the apex of the left ventricle (Fig. 3). Sections of the renal and myocardial lesions revealed mature fat tissue (Figs. 4 and 5). Sections of the cerebral tubers reveal the typical dysgenetic nerve cells. The interesting lesion is the extensive thickening and fibrosis of the endocardium of the left ventricle (Fig. 6). Sections of the left ventricle (Fig. 7) reveal subendocardial fibrosis and interstitial fibrosis of the myocardium with encroachment of the fibrous connective tissue upon the myocardial fibers. The skin lesion was diagnosed as erythema multiforme. The cause of death was viral pneumonia.



Fig. 6

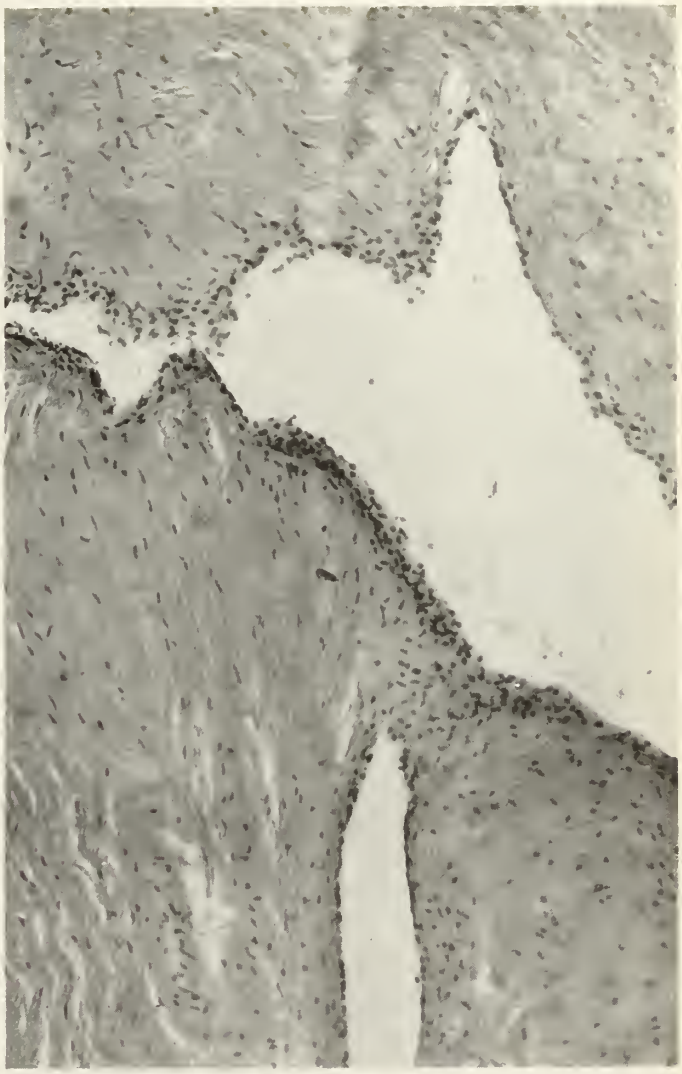


Fig. 7

Discussion

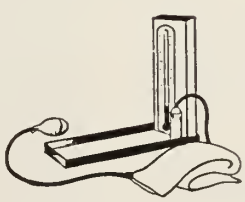
Cases of tuberous sclerosis in so-called formes frustes are not unusual. In many of these cases such a clinical diagnosis is difficult if not impossible.

The tubers were characteristic. The presence of renal tumors comprised of mature fat tissue is difficult to understand. They may be derived from pluripotent cells that form in this case hematomatous lipomas. The fat tissue may also be the end result of degenerative lesions as tissue destroyed by inflammation may be replaced by fat tissue. Galindo et al[1] report a case with areas of fat tissue within the heart muscle and they have been unable to find a similar case. This case then is a second case of hematomatous lipomas of the heart.

We have been unable to find a case where subendocardial fibrosis (fibroelastosis) of the heart is concomitant with tuberous sclerosis. That raises the question of the etiology of subendocardial fibrosis. If one does not want to assume two different disease entities, one has to suggest that both the subendocardial fibrous and tuberous sclerosis are etiologically linked.

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"Medicine and Society"*

Senator Edmund S. Muskie

I suppose there is no more appropriate place to address a student group in this Spring of 1969 than the Conrad Hilton. For around this building swirled the astonishing and disturbing events of last summer and what happened here has been studied, debated, reported and analyzed to the point of despair.

I do not propose to go back over the causes and results of that confrontation. I imagine that everyone has made up his mind one way or another, and there is no constructive purpose in reopening the history of those days.

But the historical accident that brings me here today – half a year after the Democratic National Convention – cannot pass unnoticed. For those who view the August confrontation as a justifiable protest by the young against the "establishment," there is a certain irony attached to my appearance today; for those who ignore the *meaning* of protest, this appearance may hold little significance.

Certainly, the Chicago demonstrators and many of the campus activists who have seriously disturbed many of our colleges are dissatisfied with things *as they are*. They haven't been able as yet to suggest what they want things *to be*, and this does not seem to me to be very helpful to those of us loosely defined as the "establishment" who are willing to listen and change when constructive change is proposed.

It should be apparent to young people that they hold no exclusive patent on dissatisfaction. It should also be clear that dissatisfaction in the abstract offers no solution to the problems arising from our failures and inadequacies.

I do not propose that you deal with our social problems in my terms, or in anybody's terms except your own – but I do insist that you deal with them in *some* terms – something more than a destructive, revoluntionary approach which leads not to progress but to chaos.

For medical students particularly, the need for constructive alternatives to presently unacceptable practices is especially important. Most of you here today are aware that the system by which quality health care is delivered to Americans leaves much to be desired.

Most of you know that too many people today are not able to gain entry into a system based on the willingness and ability of the private practitioner to offer medical care to all people.

And I am sure that you know that, despite Federal programs of Medicare and Medicaid, far too many people are denied the access to medical care that has become a recognized right in this country today. Our health care system is burdened with many deficiencies; and even if we accept as fact the tremendous improvements of the past quarter century, we know that the performance of the system leaves much to be desired.

We are concerned with the rapidly rising costs of medical care; with the shortage of trained medical personnel; with the over-commercialization of drugs; with the vast gulf between medical research and the application of research knowledge to patient care.

These concerns are real. The problems they pose are with us today, and I think that all of us would like to solve them now, if possible.

But, to my mind, the solutions to these difficult health care problems do not lie with total destruction of the institutions built up over the years to provide care. Instead, the solutions will be best achieved through institutional change and improvement. This does not mean that you should passively accept things as they are, or that you should patiently await change as others see it. You have the responsibility and the opportunity as young physicians to seek new solutions; to question old ways; to articulate forcefully your plans and hopes. You cannot be satisfied until the nation's health care system provides for the health needs of all of us.

What, then, should you be seeking? What should you be asking of us, and what do we ask of you?

First, I propose that you continue to look very seriously at the relationship of the health care industry to society in general. I know that you are doing this now. This annual meeting is a measure of your interest.

But it has too often been true that the medical community has not involved itself in the affairs of the greater community. The field of public health, for example, has developed in almost complete separation from the field of medical care. Preventive medicine has been considered a rather uninteresting side path from the true profession of medicine, and the staggering new problems of environmental health have grown up almost unnoticed by practicing physicians.

In a broader sense, few physicians have become deeply involved in the social problems of this generation – race relations, poverty, education, war and peace, economic growth. Too often those who have become involved are viewed with some suspicion by their colleagues.

In speaking of this involvement, I am not referring to the kind of political pressure operation that your seniors have often mounted when they believe the interests of the profession are threatened. There is a place – and a very important one – in our society for political pressure, and I do not fault the American Medical Association for using it. But I think we should recognize it as

*Keynote Address presented at the Annual Convention of the Student American Medical Association, Conrad Hilton Hotel, Chicago, Illinois on April 1, 1969.

a kind of self-interest device not related to what I believe should be broad concerns for the quality of life.

For the physician is first, a person – who will live in a community, a State, a nation and a world with other billions of people. And he will have to deal with a changing and troubled world along with all the rest of us. And the physician is in many ways a remarkably fortunate person. He will have rare and special skills gained from an educational opportunity far beyond that of most people. He will live in relative comfort in good housing and surrounded with the amenities of civilization. He will work hard at a satisfying job. And he will be a good provider for his family.

All of these special characteristics of the physician carry with them responsibilities not necessarily shared by all of his fellow men. He is expected to have good judgment, to be intelligent, to be understanding, and to be a public man. Above all, he must be willing to serve in an open, competent, dedicated way.

To be sure, we expect this of all people, even politicians. But we have come to expect it in greatest measure from the physician – the healer.

If the physician is to be this rather extraordinary person, he must understand and participate in the great adventures of our nation – many of which touch upon a basic requirement of good health.

We have set about some monumental tasks – to abolish poverty in our time; to rebuild our cities; to restore the natural environment; to eradicate communicable disease; to provide educational opportunity for all; to assure equal rights and full participation. To carry out any one of these goals is a staggering job, but we are up against the absolute necessity of doing it all if we are to survive and prosper.

The field of medicine and health care is a full partner in the adventure, and as we proceed toward our goals, we must proceed with the full cooperation, knowledge and imagination of the health workers.

It will not be easy; it will be accompanied by change in our systems and prejudices. Long held truths may prove to be false, and long held privileges may be sacrificed.

Let me return to an earlier premise – the health care system of the United States does not work for many of its citizens. Some facts, well known to you I am sure, bear this out.

1. We have only fragmentary ideas about the health effects of pollution on mankind. We don't know anything about the long term effects of small, continuous, persistent dosages of the thousands of chemicals to which we are exposed over our lifetime. What we don't know can, and I believe does, hurt us.

2. It just seems reasonable to me that life conditions in our central cities are creating problems of physical and mental health that sap the strength and vitality of most of our urban dwellers.

3. Our infant and maternal mortality rates are scandalous. Lack of comprehensive pre- and post-natal care condemn thousands of mothers and children to ill-health, mental retardation, physical defects, and death.

4. Family planning services are almost totally unavailable to those who want it most.

5. Rapidly rising medical care costs, inadequate insurance programs, and underfinanced medical care programs are putting medical care out of reach of low income families.

6. Maldistribution of facilities and health personnel leaves many areas of the country, rural and urban, without services.

7. With plenty of food available, there are too many poorly nourished people in the country.

8. Access to the health care system, in a mobile society, is difficult and inefficient.

9. We haven't yet learned how to move from the promise of the laboratory to the universal application of new knowledge.

These are just a few examples of the current inadequacies of the system. We have enough knowledge to deal with most of them now – if we are willing to make some changes.

I am reminded of the Maine potato farmer who was visited at his farm by the shiny new county agent, just graduated from Agriculture school.

The agent looked over the stony, unproductive fields and said, "Mr. Brown, I could teach you a lot of things that would help you farm better."

Farmer Brown looked at him in that inscrutable State of Maine way, puffed on his pipe and said, "Young man, I already know how to farm better than I am doing right now."

And that's true in health care, and it's true in environmental management. It's also true in urban restoration, and it's probably true in foreign affairs and defense. We already know how to do a better job than we are doing.

So why don't we do it?

I suppose that part of the answer is that we are so cluttered up with competing institutions that we can't get organized to do it.

We can propose a beautiful health care facilities system for a community, with carefully positioned, coordinated, integrated, interdigitated, unified, program planned, viable, conceptualized structures – neighborhood centers, acute care hospitals, extended care facilities, convalescent centers and all; but no community that I know of has ever put one together. We just haven't the institutional flexibility at the community, State, or Federal level to let it happen.

And until we devise better ways to free up our institutions – including governments, professional societies, profit and non-profit private health enterprises, we won't be able to apply already known solutions, much less proceed with the application of presently unknown knowledge.

I have devoted much of my time in the Senate to try to deal with this problem – which seems to pervade all of our noblest efforts. In no area does it loom up larger

than in our struggle to preserve and restore the natural environment.

We have devised unique and complicated proposals to unlock the institutional barriers which hold back progress. The Congress, the States, administrations of at least four Presidents have all struggled with the problems and yet, even with the application of the best minds in the country, we are still not making significant progress.

If this is true in environmental management – where everybody is for improvement – where everybody wants to clean up our streams and our air – how much more difficult will it be to bring about the institutional changes necessary to assure universal, quality health care?

I suspect this problem will be with you for most of the years of your professional practice, but I will leave you with one very important principle – applicable to your profession as to many other areas where it has already happened.

If you, as a profession, do not proceed to make available to the people of America the best quality of health care you know how to provide – to all people regardless of geographic location, income, status in life, race, or any other irrelevancy, someone else will do it for – or to – you. We have come to view health care as a right – not a privilege – and inevitably it will be available. Your option is either to assure that health care is available, or move aside and let the system be designed by others.

I suggest this principle not as a threat, but as a promise. If you are willing to develop the new institutions we need to assure our right, you will have the full support of the people – and I suspect that you will find the practice of your profession even more exciting and fulfilling.

Dr. Abraham Edel, writing in your excellent *The New Physician,* put it very simply:

"The first ethical mandate for the medical profession, like the old Socratic injunction of 'know thyself,' is to understand what is going on and what commitments for medicine are emerging."

Know yourself, know the commitment for medicine and, I add, know the society within which you live.

AMA'S 1969 ANNUAL CONVENTION OFFERS INTERESTING VIEWING, LISTENING

CHICAGO — An abundance of valuable information will be presented in a variety of interesting ways to those attending the American Medical Association's 1969 Annual Convention in New York City.

Some information will be available to visitors in the comfort of their convention hotels or motels. This will be through the special televising of convention news, interviews, panels, and scientific presentations.

Such TV programming, a highlight of AMA Annual and Clinical conventions in recent years, will be available from 5 p.m. to midnight Sunday, July 13; from 7 a.m. to 9 a.m. and from 5 p.m. to midnight Monday through Wednesday, July 14 through 16; and from 7 a.m. to 9 a.m. Thursday, July 17.

Much of the scientific activity of the July 13 through 17 Annual Convention will be in the Coliseum and New York Hilton Hotel. The House of Delegates will meet at the Americana Hotel.

In addition to papers and lectures which will be presented in the Coliseum and New York Hilton, there will be exhibits, color closed circuit television, and medical motion pictures.

Some 250 to 300 scientific exhibits are expected at the Coliseum, including special ones on arthritis, pulmonary function, fresh tissue pathology, fractures, resuscitation, and laboratory medicine.

Industrial exhibits also will be on view at the Coliseum.

From rooms set aside at the Coliseum, viewers will be able to see closed circuit scientific presentations televised in color from Cornell University Medical Center.

The Coliseum also will be the site of medical film showings, including the premiere showing of some new films.

X-Ray of the Month – No. 6*

History

This patient is a 32-year-old male who has been admitted many times for treatment of long-standing severe diabetes and several of its complications. He has recurrent urinary tract infections and was admitted on this occasion with right flank and lower abdominal pain, and a low abdominal mass.



Diagnosis: Cystitis Emphysematosa

The large, oval radiolucency arising in the pelvis represents air in the urinary bladder. Air in the bladder is always abnormal and has three causes: Instrumentation, a fistulous connection with a hollow viscus such as bowel or vagina, and, as in this case, a spontaneous production of air by gas-forming bacteria.

Cystitis emphysematosa is an uncommon but well recognized condition in which gas is formed spontaneously within the lower urinary tract. In a review of the world literature on this subject, Bailey[1] found that the condition is found predominantly in patients with diabetes of long standing. Fifty-seven of the one hundred seventeen patients reviewed had demonstrated glycosuria, and all had urinary tract infections, the predominant organism being E-coli or aerobacter aerogenes.

The pathogenesis of gas in the lower urinary tract is, in those patients with glycosuria, a fermentation of glycose into carbon dioxide and lactic and butyric acid. In those patients without glycosuria, carbon dioxide is released from a breakdown of albumin by certain genera of E-coli bacteria.

In the past, two separate entities have been described; primary pneumaturia with air in the lumen of the bladder, and cystitis emphysematosa or air in the wall of the bladder. These conditions are now generally considered to be the result of the same pathological process. Spontaneous emphysema of the kidneys and perirenal spaces has also been reported due to the same processes. All of these patients have been diabetic.[2]

The condition is relatively benign in itself, and the abnormal collection of air is seen to disappear within a few days with control of the underlying infection and occasionally with control of the glycosuria alone.

*From the Department of Radiology, Maine Medical Center, Portland, Maine 04102.

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Maine Heart Association Notes

20 Winter Street, Augusta, Maine

Duration of Hospital Stay Following Acute Myocardial Infarction

The current practice in the United States is to hospitalize all patients with acute myocardial infarction. . . .

. . . The recognition of the ubiquity of disordered heart rhythm during the early phase of infarction. the development of effective pharmacologic and electrical methods for correcting arrhythmias and the introduction of the coronary care unit favor immediate hospitalization of such patients. . . . the major problem at present is not whether to hospitalize but how to expedite such hospitalization.

This clear indication for hospitalizing every victim of a coronary attack is occurring at a time when hospital beds are becoming ever more expensive and scarce. . . . "limitation of length of stay to the minimum necessary for good patient care is an important factor in the efficient use of beds." How then should the duration of stay following acute myocardial infarction . . . be determined? . . .

. . . For the patient with uncomplicated myocardial infarction, in most parts of the United States the period of hospitalization has been shortened to about three or four weeks.

Practice varies widely from region to region and even within the same institution. . . .

Nearly every facet of treatment relating to acute myocardial infarction has been extensively studied. It is curious that the determinants for the duration of hospitalization have not been hitherto subjected to careful scrutiny. Furthermore, at any one period in any one location, the discharge time for patients with coronary artery disease has been uniform even though the disease varies strikingly in the severity of its manifestations. . . .

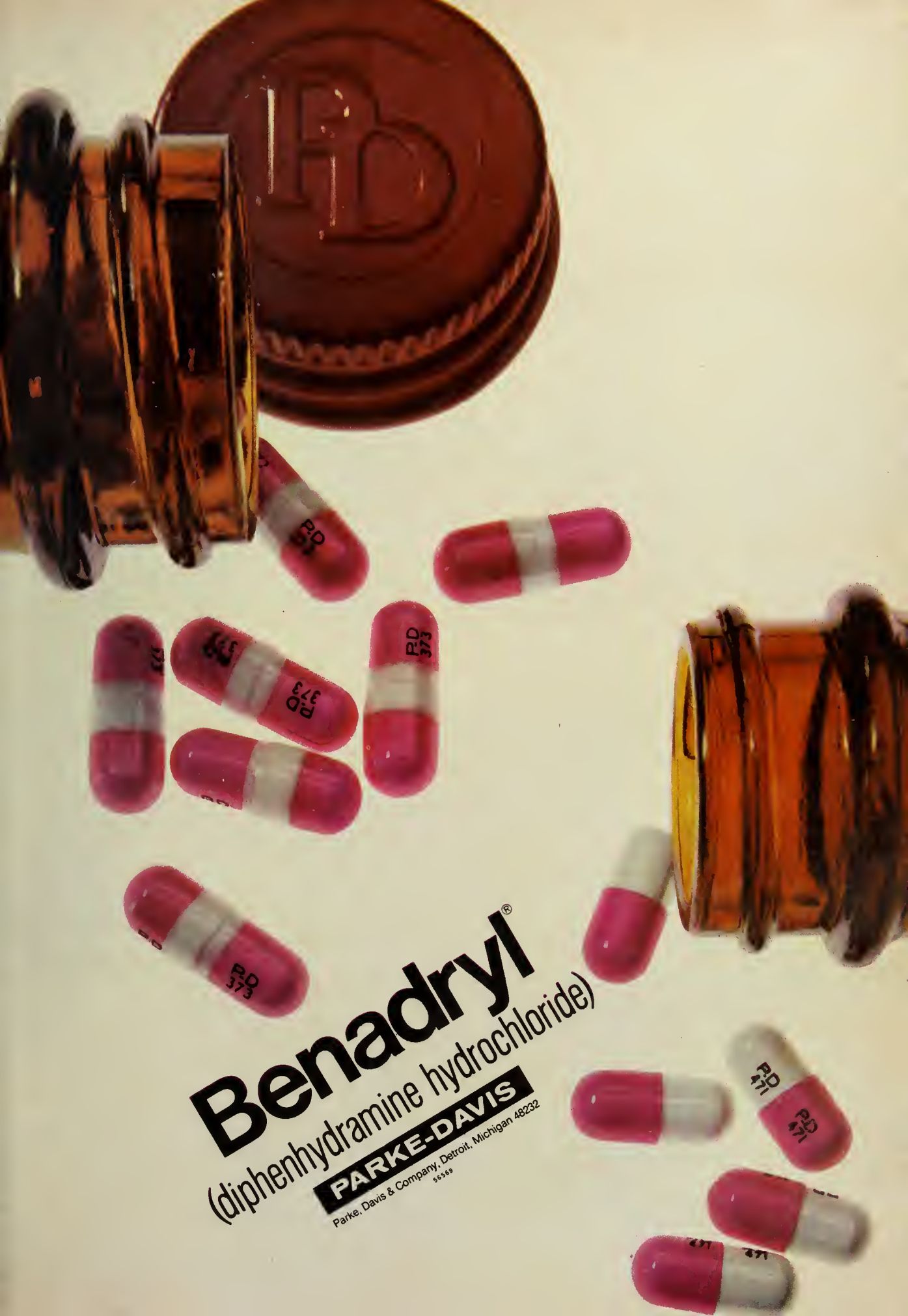
The development of coronary care units has already provided a wealth of information, some of which is applicable to the problem under discussion. . . . The major clinical complications, such as arrhythmias, shock and congestive heart failure, generally occurred within the initial 72 hours after onset of infarction. By the end of the first week the vast majority of patients who survived were in a convalescent state, requiring only custodial care. . . .

It is our contention that the patient who does not exhibit any complications during the initial week of hospitalization does not derive special benefit by remaining in the hospital beyond the tenth to twelfth day. . . . the 10 to 12 day figure represents a reduction by about half of the current length of hospitalization. . . . such an abbreviation would save hundreds of millions of dollars annually to the medical consumer. In addition . . . the beds made available would reduce the unconscionable delay many ill patients now face before hospital admission.

Controlled studies of the appropriate length of hospitalization in acute myocardial infarction are required to guide current practice. . . . Coronary care unit experience provides information suggesting the initial group of patients who should be studied. Patients with acute myocardial infarction who exhibited sequential electrocardiographic changes limited to the T waves — the so-called intramural pattern — did not have serious complications while in the hospital and none has died. The absence of complications and of inpatient mortality suggests that abbreviation of hospitalization would not jeopardize these patients and makes ethical such random-allocation studies. The current cost and shortage of general hospital beds makes such studies urgent.

Submitted by Jacob B. Dana, M.D., President, Maine Heart Association.

Reference: Lown, B., and Sidel, V. M. Editorial of The American Journal of Cardiology, Vol. 23, Pages 1 through 3.


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Although *Trichomonas vaginalis* infection occurs in only 5 to 10 per cent* of men, careful diagnosis will demonstrate the condition in about half of all husbands of infected women. Nine investigators* reported an average incidence of 50.8 per cent in exposed consorts.

Many clinicians have achieved a high degree of success in treating trichomonal vaginitis only after they have recognized the importance of sexual partners in perpetuating the infection. Crowley* has asserted, "it was not until we acted on this key premise that we were able to obtain positive and lasting results in our management of recurrent vaginal trichomoniasis."

Simple ten-day oral treatment with Flagyl virtually assures elimination of established trichomonal infection in men. In twenty-two of twenty-seven studies* data on the results of treating male patients revealed that all men treated with Flagyl were cured.

Indications: Flagyl is indicated in the treatment of trichomoniasis in both men and women.

Contraindications: Pregnancy; disease of the central nervous system; evidence or history of blood dyscrasia.

Precaution: Complete blood cell counts should be made before, during and after therapy, especially if a second course is necessary.

Side Effects: Infrequent and minor side effects include nausea, metallic taste and furry tongue. Gastrointestinal disturbances, flushing and headache sometimes occur, especially with concomitant ingestion of alcohol. The taste of alcoholic beverages may be altered. Other effects, all reported in an incidence of less than 1 per cent, are diarrhea, dizziness, vaginal dryness and burning, dry mouth, rash, urticaria, gastritis, drowsiness, insomnia, pruritus, sore tongue, darkened urine, anorexia, vomiting, epigastric distress, dysuria, depression, vertigo, incoordination, ataxia, abdominal cramping, constipation, stomatitis, numbness or paresthesia of an extremity, joint pains, confusion, irritability, weakness, cystitis, pelvic pressure, dyspareunia, fever, polyuria, incontinence, decreased libido, nasal congestion, proctitis and pyuria. Elimination of trichomonads may aggravate candidiasis.

Dosage and Administration: *In women:* one 250-mg. oral tablet three times daily for ten days. A vaginal insert of 500 mg. is available for local therapy when desired. When used, one vaginal insert should be placed high in the vaginal vault each day for ten days; concurrently two oral tablets should be taken daily.

In men: When trichomonads are demonstrated, one 250-mg. oral tablet twice daily for ten days in conjunction with treatment of his female partner.

Dosage Forms: Oral tablets—250 mg.
Vaginal inserts—500 mg.

*Complete list of references on request.

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AMERICAN CANCER SOCIETY - MAINE DIVISION, INC.

Brunswick, Maine

Dr. Farber Addresses American Cancer Society's Science Writers' Seminar

NEW ORLEANS, LA. — Immediate action was urged recently by the President of the American Cancer Society to close the growing gap between public demand and government response in cancer research and care of cancer patients.

Dr. Sidney Farber, Harvard Pathology Professor and Research Director of the Children's Cancer Research Foundation, Boston, said faltering federal support of research and patient care has not kept pace with other progress in this nation. He spoke at the opening session of the American Cancer Society's Science Writers' Seminar where 50 of the nation's leading scientists will report on progress and problems to 60 science and medical writers from all sections of the United States.

He said that the gap between research and the patient has not been narrowed. "Developments, particularly in the field of chemotherapy," Dr. Farber said, "are slow to reach a large portion of the 900,000 patients suffering from cancer in America who might be benefited by these compounds or other new methods of therapy."

Dr. Farber decried the lack of progress in developing the federal government's Regional Medical Programs. He said, "The concept of medical complexes for treatment of heart disease, cancer and stroke was a bold and imaginative idea which could have shortened the distance between laboratory and the patient but despite intensive effort in many regions, this concept has not been realized.

"The responsibility for this failure rests equally upon the government, the physician and the public. Until a more ringing cry is raised by those affected by cancer, progress in this direction will not occur."

He said that the federal support of research is actually losing ground. "Because of the standstill budget of the last five years and because of inflation," he said, "the amount of dollars required to support research today at the same level as 1962 would require 220 million dollars rather than the present appropriation of 172 million dollars. And this would mean just standing still."

Calling for an expanded role, for both research and clinical medicine, Dr. Farber said that increases in government funds should match the rate of steady increase reflected in voluntary effort.

He said, "Whereas the amount of money appropriated for research within the budget of the National Cancer Institute has remained practically at the same level for the past four or five years (with an actual decline between fiscal '68 and '69) the trend of voluntary support has steadily increased."

He reported that the public contributed about $23,000,000 to the American Cancer Society in 1954 and in 1968 this figure had reached more than $55,000,000.

"There is little doubt as to the public's interest in improving the level of both research and treatment of cancer," he said. "We must find new means of reducing the communications gap between what the public needs and urgently wants and what is actually being produced today."

Dr. Farber acknowledged that progress against cancer is being made although its pace is much slower than that of other facets of the nation's growth. He said, "Lives that would have been lost ten years ago today can be saved. It is true, however, that increased efforts even a decade ago would have produced greater advances in etiology or in the biochemical approach to control, and, doubtless, more vigorous efforts in early casefinding would have improved salvage.

"The greater tragedy, however, rests in the failure to take advantage of the 'biological explosion' that has opened new avenues in developing methods of cellular control and in investigating mechanisms of abnormal growth."

He said that now the opportunity exists in fundamental research to create great progress if adequate support is available. He said, "In promising areas of etiology, the immune reaction, chemotherapy and chemical and viral causation of cancer, enough is known upon which to spend more money that is now available."

"The fact is," he added, "that adequate funds can attract the molecular scientists, the biochemists, the physicists and others from industry into medical research. And money, enough of it, can train those others who might not otherwise be trained, and bring them into areas of research applicable to cancer." He said this could reverse the present "brain drain" that industry's soaring economy is placing on scientific and research talent.

"Money too," he added, "can be used to implement the promises of better treatment, more widely disseminated to the cancer patient. At the same time that more adequate facilities of treatment are provided, we could learn more about that vast number of persons ill with cancer. We really don't know today how many people are suffering from this disease. Cancer is not even a reportable disease in many states. Only the deaths are known. The possibilities in the area of better treatment are practically unlimited."

Dr. Farber said that neither a qualitative nor quantitative increase in any area of medical research pertinent to the cancer problem is possible at the present level of support.

He said, "To solve the cancer problem — developing of control through: identification of causes, producing modalities to inhibit or reverse abnormal growth, and discovering methods of prevention — will require more effort than exists today, regardless of the time element."

American Cancer Society News Service Release

Honorary Pin Recipients to Receive Awards at 1969 Annual Session of the M.M.A.

Presentation of the Association's Honorary Pins will be made by Asa C. Adams, M.D., President of the M.M.A., at the Annual Banquet, Monday evening, June 16 at 7:00 P.M.

FIFTY-YEAR PINS

Fifty-Year Lapel Pins will be presented to the following members who were graduated from Medical School in 1919:

Aroostook County

STORER W. BOONE, M.D. – Dr. Boone, a native of Presque Isle, Maine, has practiced in that city since 1921. He was graduated from McGill University Medical School in 1919 and interned at the Montreal General Hospital. He took postgraduate courses at Poly Clinic, New York City and the New York Postgraduate Hospital. He is on the staff of the Arthur R. Gould Memorial Hospital and Cary Memorial Hospital.



Dr. Boone



Dr. Jameson

FRANCOIS J. FAUCHER, M.D. – Dr. Faucher has practiced in Grand Isle, Maine since his graduation from Montreal University School of Medicine in 1919. He took postgraduate courses at Hotel-Dieu Montreal and Notre-Dame Hospital in Montreal. He is a native of St. Ephrem de Tring, Canada.

Franklin County

CURRIER C. WEYMOUTH, M.D. – Dr. Weymouth was a member of the Council of the Maine Medical Association from 1943-1945 and from 1951-1954. He was graduated from Tufts University School of Medicine in 1919 following which he practiced in Medway, Massachusetts from 1919 to 1925, Hopedale, Massachusetts from 1925 to 1932 and since 1932 in Farmington, Maine. He is a native of Freeman, Maine.

Knox County

C. HAROLD JAMESON, M.D. – Dr. Jameson was President of the Maine Medical Association in 1951-1952 and prior to that had served three years as Councilor for the Third District of the Association. A graduate of Harvard Medical School in 1919, Dr. Jameson interned at Peter Bent Brigham Hospital in Boston and practiced General Surgery in Rockland, Maine from 1920 until his recent retirement. He took postgraduate courses at Peter Bent Brigham Hospital and at the Free Hospital for Women in Brooklyn and was a member of the staff of the Knox County General Hospital. A native of Thomaston, Maine, he now resides in Camden, Maine.



Dr. Saunders



Dr. Ames

ANNA PLATT, M.D. – Dr. Platt, a native of Baltimore, Maryland, has been a resident of Maine since 1943; in Friendship from 1943 to 1953 and since then in Rockport. Following her graduation from Johns Hopkins Medical School in 1919, she interned at Bellevue Hospital, New York City. She was on the staff of N.Y. Hospital-Cornell Medical Center, 1922-1943, N.Y. Infirmary for Women and Children, 1921-1935 and was instructor in Clinical Medicine at Cornell, 1923-1943. She has been on the Board of Trustees for the Knox County General Hospital since 1948.

SALLIE H. SAUNDERS, M.D. – A native of Cambridge, Massachusetts, Dr. Saunders who graduated from Tufts University School of Medicine in 1919, retired to Camden, Maine in 1960. Dr. Saunders practiced in Hopedale, Massachusetts from 1918 to 1921, in Boston, Massachusetts from 1921 to 1935 and in the Massachusetts Department of Public Health, Division of Maternal and Child Health from 1936 to 1960. She served as Director of this Division from 1954 to 1960.

Penobscot County

FORREST B. AMES, M.D. – Dr. Ames served as President of the Maine Medical Association from 1948-1949 and as Councilor for the Sixth District from 1943 to 1947. He was graduated from Harvard Medical School in 1919, interned at Boston City Hospital from 1919 to 1921 and was in the Department of Radiology at the Boston City Hospital from 1921 to 1923 when he located in Bangor. He organized the Department of Radiology at the Eastern Maine General Hospital and was Radiologist at St. Joseph Hospital in Bangor. A native of Bangor, Maine, he now resides in Brewer, Maine and is retired.

Piscataquis County

ALBERT M. CARDE, M.D. – A native of Bowdoinham, Maine, Dr. Carde was graduated from Bowdoin Medical School in 1919 and interned at the Maine General Hospital in Portland in 1919-



Dr. Carde



Dr. Fogg

1920. He took postgraduate courses at Boston City Hospital, Peter Bent Brigham Hospital, Beth Israel Hospital and Worcester City Hospital. He practiced in Lake View, Maine from 1920 to 1925. In 1925, he located in Milo, Maine where he practiced until his retirement in 1962.

NORMAN H. NICKERSON, M.D. – Dr. Nickerson was President of the Maine Medical Association in 1953-1954 prior to which he had served as Councilor for the Sixth District from 1940-1943 and from 1949-1952. He was graduated from Bowdoin Medical School in 1919 and interned at the Eastern Maine General Hospital in Bangor in 1919-1920. He took postgraduate courses at Harvard Medical School and Tufts University School of Medicine. He served during World War II from 1942 to 1946 and was discharged as a Lieutenant Colonel. On August 4, 1920, he started his practice in Greenville, Maine where he is still located.

FIFTY-FIVE-YEAR PINS

Fifty-Five-Year Pins will be presented to the following members who received Fifty-Year Pins in 1964:

Androscoggin County

HUDSON R. MILLER, M.D. – A native of Lewiston, Maine, Dr. Miller was graduated from Bowdoin Medical School in 1914 and interned at Bellevue Hospital (ALR Service) and New York Eye and Ear Infirmary (Ophthalmology Service). He has specialized in OALR in Lewiston since 1919.

JAMES A. WILLIAMS, M.D. – Dr. Williams was graduated from Bowdoin Medical School in 1914. He interned at the St. Mary's Hospital in Lewiston and practiced in Jonesport, Maine from 1917 to 1924 and in Lewiston from 1924 until his retirement in January 1969. Dr. Williams is a native of Topsham, Maine.

Cumberland County

C. EUGENE FOGG, M.D. – Dr. Fogg served in the Army and Navy from 1917 to 1947 when he was discharged as a Colonel (Brigadier General, Medical Corps, N.G., Retired). He is a native of Portland, Maine and was graduated from Bowdoin Medical School in 1914 and interned at the Maine General Hospital.

JOSEPH R. RIDLON, M.D. – Dr. Ridlon was graduated from Bowdoin Medical School in 1906, interned at the Maine General Hospital and took postgraduate courses at London School of Tropical Medicine. He had hospital appointments at the Marine Hospital in Savannah, Georgia, New York, New Orleans, Galveston, Texas and Detroit, Michigan. He served in the USPHS and U.S. Navy and was retired with the rank of Colonel. He is a native of Gorham, Maine where he now resides.



Dr. Ridlon

Piscataquis County

HARVEY C. BUNDY, M.D. – A native of Hyde Park, Vermont, Dr. Bundy was graduated from the University of Vermont Medical College in 1914. He practiced in Lake View, Maine from 1915-1918, Mars Hill, Maine from 1921-1927 and in Milo, Maine from 1927 until his retirement several years ago. He has also served as Chief Surgeon for the Bangor and Aroostook Railroad for many years. He was Chief Surgeon for Milo Community Hospital from 1928-1955 and has been Chairman of the Board of Trustees since 1960.

SIXTY-YEAR PIN

A Sixty-Year Pin will be presented to the following member who received his Fifty-Year Pin in 1959:



Dr. Bundy



Dr. Bunker

York County

WILLARD H. BUNKER, M.D. – Dr. Bunker, who was graduated from Bowdoin Medical School in 1909, was President of the Maine Medical Association in 1938-1939 and prior to that had served as Councilor for the Fifth District. Dr. Bunker is a native of Manset, Maine and practiced in Calais, Maine from 1910-1949 when he moved to York Harbor, Maine where he is still in active practice. He is a member of the Surgical Staff of the York Hospital and the Portsmouth Hospital.

SIXTY-FIVE-YEAR PINS

Sixty-Five-Year Pins will be presented to the following members who received Fifty-Year Pins in 1954:

Penobscot County

CARL J. HEDIN, M.D. – A native of Wase, Sweden, Dr. Hedin has been a citizen of the United States since August 1896. He was graduated from Dartmouth Medical College in 1904, interned at Tewksbury Massachusetts State Hospital where he was Staff Physician from 1905-1908. He was Assistant Superintendent of the Augusta State Hospital from 1908-1912, Superintendent, Pineland State School 1912-1919, Superintendent, Bangor State Hospital from 1919-1948 and was in private practice in Brewer, Maine from 1948 to 1964 when he retired.



Dr. Hedin

York County

RAY L. WHITNEY, M.D. – Dr. Whitney was graduated from Harvard Medical School in 1904. He served residencies at Worcester Massachusetts State Hospital from 1907-1914, McLean Hospital, Waverley, Massachusetts from 1914-1947 and has been located in Cape Porpoise, Maine since 1947.

Special Communication to The Journal

The Somerset County Medical Association is currently embroiled in the confused application of federal programs in its area. This is not entirely dissimilar to the dispute that rocked Washington County and its Maternal and Infant Health Program. Various programs are being started, funded etc. without due recourse to the organization of physicians. Accordingly the county has passed the following resolution. This might be considered by other counties in advance.

"Since the Upper Kennebec Valley Regional Health Agency and related committees is involved in the dispersal of medical services in Somerset County and since the Somerset County Medical Association is the only medical professional organization in this county; be it resolved that any program directly effecting the dispersal of medical services in this county will elicit the support of Somerset County Medical Association and its members only when such programs have been discussed and duly voted on at a regular meeting of this organization."

John P. Dow, M.D.
Secretary, Somerset County
Medical Association

Necrologies

Frederick T. Hill, M.D.
1889-1969

Frederick T. Hill, M.D., 79, of Waterville, Maine, a nationally known Ear, Nose and Throat specialist and Past President of the Maine Medical Association, died on April 22, 1969. He was born in Waterville, Maine on June 14, 1889, son of Dr. James F. and Angie Foster Hill.

Dr. Hill attended Waterville public schools, Coburn Classical Institute, was graduated from Colby College in 1910 and received his medical degree from Harvard Medical School in 1914. After service as an Aural House Surgeon at the Massachusetts Eye & Ear Infirmary, Dr. Hill entered the Army Medical Corps in World War I and then returned to Waterville in 1919 where he started his practice.

He was Medical Director at Thayer Hospital for thirteen years and was credited with developing the hospital into one of the nation's finest community medical centers. In 1964, he became director of development and future planning at Thayer and was active in this position until he became ill about a week before his death. He was cited as Waterville's "man of the year" in 1968.

In 1962, the American College of Hospital Administrators gave Dr. Hill its highest award with a citation which said he had "done more in the field of medicine than any other person to bring medical care to the sick of the State of Maine." The Maine Tuberculosis and Health Association presented him its Huddilston Award for outstanding service in 1958.

Dr. Hill was an honorary member of the Kennebec County Medical Association and the Maine Medical Association and would have been eligible to receive a fifty-five-year honorary pin at the 1969 annual session of the Maine Medical Association. He was also a member of the American Medical Association, was a former President of the New England Otological and Laryngological Society, Treasurer of the American Laryngological Association, and had been a manager of the American Society for the Hard of Hearing.



Surviving are his widow, the former Ruby W. Choate; a brother, Dr. Howard F. Hill of Waterville; four daughters, Mrs. Ralph Field of Fairfield, Mrs. Robert Millett of Hamilton, Massachusetts, Mrs. Alvo Martin, Jr. of Tucker, Georgia and Mrs. Frederick Ashman of Mount Holly, New Jersey.

Edwin W. Harlow, M.D.
1906-1969

Edwin W. Harlow, M.D., 62, of Waterville, Maine died on April 12, 1969. He was born in Gardiner, Maine on July 3, 1906, son of Lincoln and Lucy P. Harlow.

Dr. Harlow attended Gardiner High School, Colby College and received his medical degree from the Boston University School of Medicine in 1932. He took postgraduate courses at the Massachusetts Memorial Hospital in Boston from 1931 to 1933.

He practiced in Skowhegan from 1933 to 1938 before locating in Waterville.

Dr. Harlow was an affiliate member of the Kennebec County Medical Association and the Maine Medical Association.

Surviving is his widow, the former Emma Frances Tozier.

Albert J. Grish, M.D.
1908-1969

Albert J. Grish, M.D., 60, of Kings Park, New York, died on March 27, 1969. He was born in Zurich, Switzerland on June 24, 1908.

Dr. Grish received his medical degree from the University of Bern in 1939. He interned at the Beth Israel Hospital in New York from 1952 to 1953 and served residences at the Good Samaritan Hospital in New York from 1953 to 1954 and the Middletown State Hospital in New York from 1954 to 1956.

He practiced at the Rumford Community Hospital from 1959 to 1961 and at the Pineland Hospital and Training Center before moving to New York in 1964.

Dr. Grish was a member of the Cumberland County Medical Society, the Maine Medical Association and the American Medical Association.

Surviving is his widow, Mary Grish.

County Society Notes

ANDROSCOGGIN

The meeting of the Androscoggin County Medical Association was held at the Central Maine General Hospital in Lewiston, Maine on March 20, 1969. The meeting was called to order by the President, John W. Carrier, M.D. with seventeen members present.

Dr. Carrier introduced the speaker of the evening, Mrs. George R. Healy, the director of the Tri-county Health Commission. Mrs. Healy outlined the Partnership for Health Legislation Laws; Part A: Each State must designate the responsible agency to oversee the plan. Also by law their agency must have an advisory board. Part B: Regional or area, which includes cities, shall plan for comprehensive (physical, mental, environmental) care. Androscoggin, Franklin and Oxford Counties are considered our regional area.

Tri-County Health Planning Agency (non-profit) is the title and an application has been submitted to Washington for organizational funds.

DONALD L. ANDERSON, M.D., *Secretary*

CUMBERLAND

A meeting of the Cumberland County Medical Society was held at Valle's Steak House in Portland, Maine on March 20, 1969. Following a social hour and dinner, the meeting was called to order by the President, George F. Sager, M.D.

OLD BUSINESS: Dr. Sager announced the appointment of an Ad Hoc Committee of the Cumberland County Medical Society to work with the City Health Department to solve the problem of the City Health Physician. Members of that committee include: Drs. Philip P. Thompson, Jr., Chairman, Douglass C. Pennoyer, Albert Aranson, William L. MacVane, Jr. and John R. Davy.

The Nominating Committee reported that they had not had a chance to meet to name members to the new expanded Executive Committee.

NEW BUSINESS: The Bylaws are to be revised by Drs. Morrill Shapiro and Robert H. Pawle before they are printed in final form and presented to the membership.

The Legislature Committee, chairmaned by Howard P. Sawyer, Jr., M.D., reported that LD 104, the chiropractor bill, was still before the House. LD 279, a bill to increase the statutes of limitations of malpractice is under consideration. LD 1050 was discussed. This bill deals with the reporting of physicians who are mentally ill. The Committee on Health Careers, chairmaned by Robert E. McAfee, M.D., reported that Maine is now 38th in students in Medical School.

The meeting was then turned over to the Program Committee, and Dr. Sager, in the absence of Dr. Whitney, introduced George W. Hallett, Jr., M.D. Dr. Hallett discussed the use of Paramedical Personnel as has been used in the past, and as he projects, will be used in the future. He reviewed the Russian use of Feldshers, the Midwives in Scandinavia, and then the Duke program innovated recently. He also discussed the program being started in Kansas and the Henry Silva Program begun in Colorado. This program makes use of the Pediatric Nurse Practitioner and Dr. Hallett went on to outline the duties, responsibilities, and some of the problems associated with the Pediatric Nurse Practitioner Program.

Dr. Hallett's speech was well received and certainly presented some interesting thoughts for consideration by the whole Society as to the use of Paramedical Personnel.

Sixty-five members and guests were present at the meeting of the Cumberland County Medical Society which was held at the LaFayette Town House in Portland, Maine on April 17, 1969. Following a social hour and dinner, the meeting was called to order by the President, George F. Sager, M.D.

Dr. Sager introduced our two guests, Miss Eleanor Cairns of the Maine Medical Center Library and Mrs. Jane Geer of the Mercy Hospital Library.

Alan M. Elkins, M.D. of Portland was voted into membership by transfer from the Medical Society of New York.

A report of the Nominating Committee was made by Charles W. Capron, M.D. and the vacancies on the new expanded Executive Committee were filled as follows: Drs. Laban W. Leiter, Paul Maier and Winton Briggs.

It was announced by Dr. Sager that the membership would be polled with regard to the Abortion Bill now before the Legislature in Augusta and each member is expected to vote as he feels his interpretation of the new law dictates.

The meeting was turned over to the Chairman of the Program Committee, Philip G. Whitney, M.D., who introduced the guest speaker, Mr. T. Mark Hodges. Mr. Hodges discussed New England's part in the National Medical Library Plan from its initial conception to its more recent enactments. The Plan essentially is to make information more readily available to the practicing physician and to make the Medical Libraries more instrumental in the development of medical education and continued medical education.

DOUGLAS R. HILL, M.D., *Secretary*

PENOBSCOT

Thirty members and guests were present at the meeting of the Penobscot County Medical Association which was held on March 18, 1969. The President, Lloyd Brown, M.D., presided.

Jay S. Howalt, M.D. of the New England Medical Center spoke on Abdominal Aneurysms. He gave an etiologic classification as follows: 1) Congenital, 2) Traumatic, 3) Cystic medial necrosis associated with Marfan's syndrome, 4) Syphilis, 5) Mycotic (including aneurysms due to infected emboli), 6) Polyarteritis Nodosa, 7) Post-stenotic dilitations, and 8) Atherosclerotic (most common).

Dr. Howalt related that most aneurysms are below the renal arteries and above the aorta. Changes in electric potential and the Zeta phenomenon were discussed including the role of adosine 2 diphosphate in platelet aggregation and the production of uric acid. He noted that in using Heparin there may be a rebound phenomenon producing a hypercoagulable state despite a response in the prothrombin time. Similarly, with Coumadin® there may be an escape from anti-coagulation because it is a powerful uricosuria agent.

The symptoms of abdominal aneurysms are a pulsing mass, and pain. The diagnosis is made by palpation, calcific ridge on flat film, and obliteration of the psoas shadow. An aortogram may be a "velvet trap" because the channel may be narrow; a large channel is a pre-rupture state.

Arteriography is done 1) to see if the renal arteries are involved, 2) to note displacement of the superior mesenteric artery, 3) to note patency of the hypogastric arteries and 4) to look for an aneurysmectomy.

A meeting of the Penobscot County Medical Association was held on April 15, 1969. The Secretary, William M. Shubert, M.D., presided.

The guest speaker, Michael Lazor, M.D. of the Hartford Hospital, spoke on Iatrogenic Uremia. Several cases were presented to show the effects of various drugs on renal function. Some of the newer diuretics were shown to have a depressive effect on

renal clearance associated with a marked rise in BUN. A discussion period followed, during which Dr. Lazor explained the advantages of an osmometer. Winford C. Adams, M.D. of Brewer was elected to membership.

Drs. Russell M. Lane, Leonard G. Miragliuolo and Jay K. Osler, members of the House of Delegates of the Maine Medical Association, were present to report on a recent meeting at Brunswick. Bills relating to admission of evidence, change in the statute of limitations and the chiropractic bill, LD 104, were mentioned. Also discussed was the abortion legislation now being considered. The Maine Medical Association asked that the membership be polled. A motion was made and voted that this be done by mail.

A letter from Mr. Brownlie, Servicing Administrator of the Council of New England State Medical Societies, offered to come and discuss incorporation. This was favorably received and was to be arranged for the next meeting of the Society.

WILLIAM M. SHUBERT, M.D., *Secretary*

LINCOLN-SAGADAHOC

The Lincoln-Sagadahoc County Medical Society met at the Ledges in Wiscasset, Maine on April 15, 1969. The meeting was called to order by the President, Paul A. Fichtner, M.D.

The Secretary read abstracted accounts of a memo from the Maine Medical Association re physician-owned malpractice insurance and a letter from the Servicing Administrator of the Council of New England Medical Societies offering to come and explain to us the benefits and disadvantages of incorporation of private physicians.

Nelson P. Blackburn, M.D. discoursed on the Interim Meeting of the House of Delegates of the Maine Medical Association. He outlined and explained the M.M.A. budget and discussed the various committee reports. Individual members were urged to make contact with their legislators to make our position on the Chiropractic Bill known to them. The House requested that members indicate their feelings about the Abortion Bill and that each county society send in the numerical vote of its members for or against. The vote was yes 13 – no 2.

Dr. Fichtner then turned the meeting over to Richard Evans, III, M.D., who introduced the three speakers, Drs. Aldo F. Llorente, John S. Bishop and Mr. King, from the Bath-Brunswick Mental Health Association. The services provided by the Association were outlined, as were future plans, methods of financing, and the nature of the composition of the agency staff.

GEORGE W. BOSTWICK, M.D., *Secretary*

HANCOCK

A meeting of the Hancock County Medical Society was held at the Brookside Restaurant in Ellsworth, Maine on April 9, 1969 with twelve members and two guests present.

The Continuing Medical Education Committee mentioned recommendations made by Merle S. Bacastow, M.D. of Portland to the Ad Hoc Committee of the Maine Medical Association for CME to the Council. Attention was drawn to the lack of inclusion of the County Medical Society in these recommendations.

The President, Winston G. Stewart, M.D., recommended a committee for comprehensive health planning including the Regional Medical Program at the county level to receive reports of individual hospital planning toward the regional level and specifically health care programs that have Government sponsorship.

The speaker of the evening, Neal H. Isil, M.D., Anesthesiologist of Ellsworth, spoke on Acute Respiratory Insufficiency Associated with Painful Thoracic and Abdominal Conditions.

BRADLEY E. BROWNLOW, M.D., *Secretary*

Letters to the Editor

To the Editor:

2 May 1969

I feel compelled to inform the membership of the Maine Medical Association about recent developments since they reflect on services which patients referred by them to us will no longer receive.

Our Department of Clinical Psychology has had, for some months, no fully trained psychologist available for the evaluation of in-patients, new admissions and out-patients.

The chief reason for this situation is a wide gap between the salaries that are being offered by the surrounding State and private colleges, mental health clinics, and agencies against what the State is permitted to pay.

Under the present circumstances, it appears as though no relief is going to be in sight for the next two years. Even the proposed salary increase for State employees is far too restrictive to come to grips with this problem.

Thus, we have a situation where we are no longer able to adequately diagnose our patients in accordance with their needs.

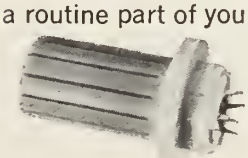
Secondly, our well-equipped Physical Therapy Department, supervised by Dr. John Lorentz, consultant during the past few months, has lost 3 of its 4 members. The 4th and last therapist is leaving employment by the end of this month. We have no applicants for even one position and physical therapy at this hospital will completely cease to exist at that time.

There are many children and numerous adults who are badly in need of ongoing physical therapy based on medical prescription. Such therapy will no longer be forthcoming.

As a further aggravating consequence, our affiliation with

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around.

In 1967 almost 45,000 new active cases were reported. Isn't that a good reason to make tuberculin testing with the white LEDERTINE™ Applicator a routine part of your physical examinations?



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Precautions: With a positive reaction, consider further diagnostic procedures. Use with caution in persons with active tuberculosis or known allergy to acacia. Vesiculation, ulceration, or necrosis may occur at the test site in highly sensitive persons.

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the University of Connecticut, School of Physical Therapy, has ceased to exist. Therefore, we will no longer contribute to train young physical therapists for further employment.

The Joint Commission on Accreditation of Hospitals will inspect Pineland Hospital and Training Center by the end of this month and I feel fairly certain that they will drop this hospital from the list of approved hospitals which will result in loss of federal funds, university affiliation, and others.

I am extremely concerned about both conditions and I consider myself helpless in remedying this situation without meaningful legislative assistance.

PETER W. BOWMAN, M.D.
Director, Pineland Hospital and Training Center
Pownal, Maine

To the Editor:

I am writing this letter to inform you of FDA's critical need to enlarge its staff of physicians and to solicit your assistance.

The major responsibility of the FDA's Bureau of Medicine is to assure our citizens that drugs are safe and effective. The professional review of drug manufacturers' applications for our approval of new drugs is a vital contribution to the health and welfare of the public and requires the services of dedicated and experienced physicians. All positions are located in the Washington, D.C. area. As part of a continuing professional development program, our physicians devote four to eight hours of the regular work-week to research, clinical work, or teaching.

For further information write to: J. J. Jennings, M.D., Acting Deputy Director, Bureau of Medicine, Department of Health, Education, and Welfare, Washington, D.C. 20204.

J. J. JENNINGS, M.D.

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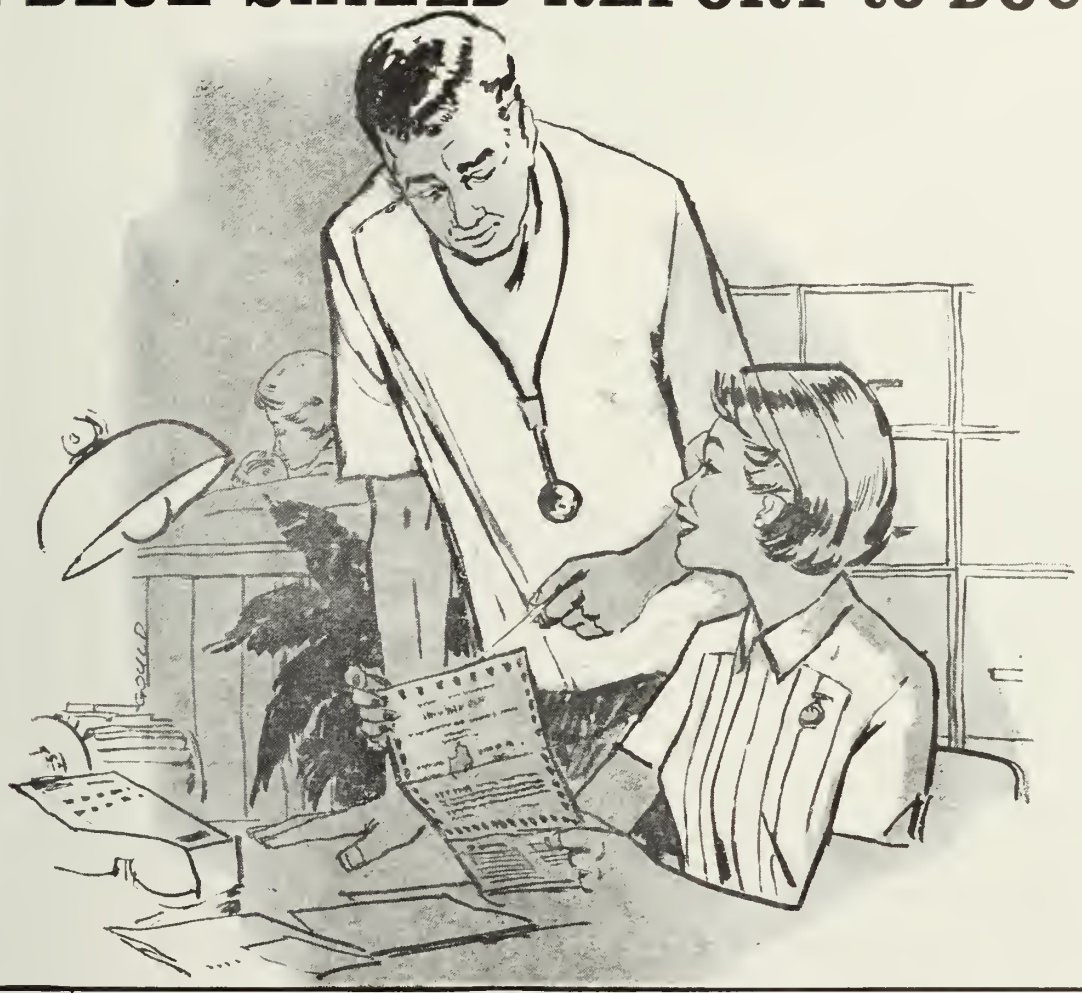
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A BLUE SHIELD REPORT to DOCTORS



REPORT # 25

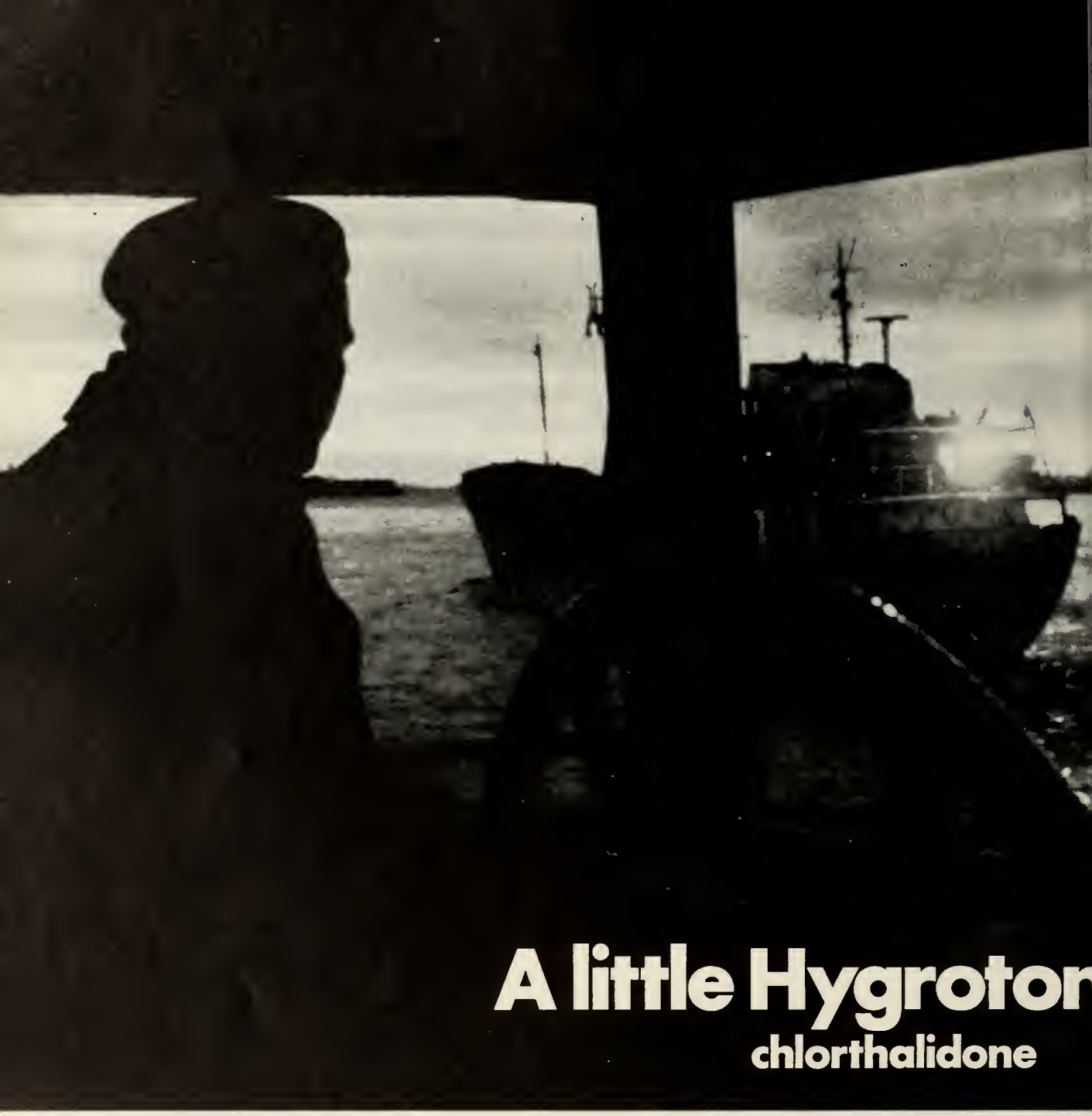
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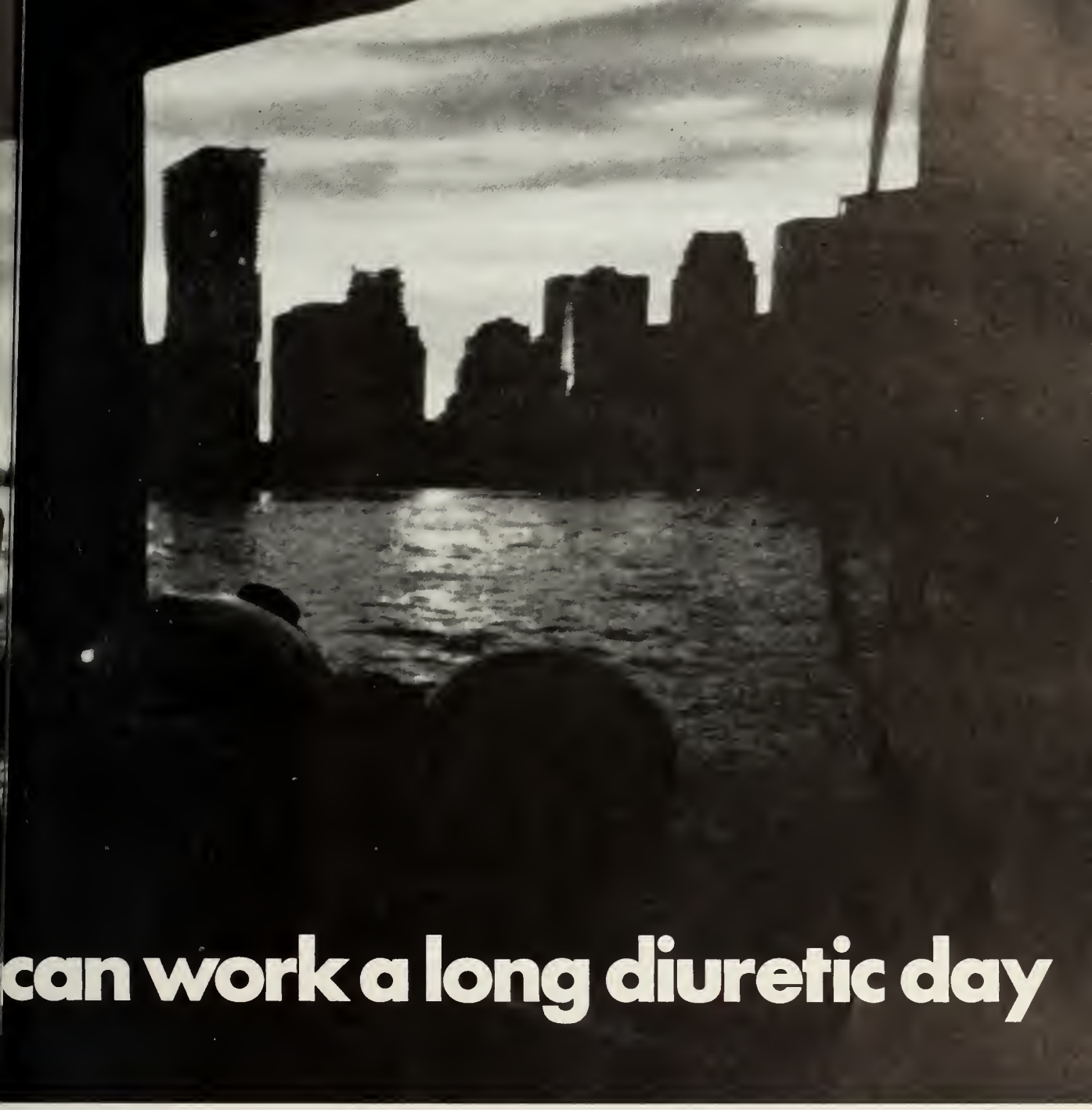
In order to facilitate efficient claim processing, please post only one in-hospital admission per claim form. Also, be sure the subscriber or spouse completes Part 1 of the form in full, including the income and signature sections. It is always advisable to recheck Part 1 of the claim form in order to avoid unnecessary delays in claim payments.

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all the way from one daily tablet to the next to help control edema and hypertension

Its prolonged action usually provides smooth, sustained diuretic effectiveness; real one-a-day dosage, right from the start; convenience and economy.

Hygroton, chlorthalidone, can cause side effects. And it's contra-indicated in hypersensitivity to the drug and severe renal and hepatic diseases.

Check the prescribing information. It's summarized on the next page.

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chlorthalidone

Indications: Hypertension and many types of edema involving retention of salt and water.

Contraindications: Hypersensitivity and most cases of severe renal or hepatic diseases.

Warning: With the administration of enteric-coated potassium supplements, which should be used only when adequate dietary supplementation is not practical, the possibility of small-bowel lesions (obstruction, hemorrhage, and perforation) should be kept in mind. Surgery for these lesions has been required frequently and deaths have occurred. Discontinue enteric-coated potassium supplements immediately if abdominal pain, distention, nausea, vomiting, or gastrointestinal bleeding occur.

Use with caution in pregnant women and nursing mothers since the drug may cross the placental barrier and appear in cord blood and since thiazides may appear in breast milk. The drug may result in fetal or neonatal jaundice, thrombocytopenia, and possibly other adverse reactions which have occurred in the adult. When used in women of childbearing age, balance benefits of drug against possible hazards to fetus.

Precautions: Antihypertensive therapy with this drug should always be initiated cautiously in postsympathectomy patients and in patients receiving ganglionic blocking agents, other potent antihypertensive drugs or curare. Reduce dosage of concomitant antihypertensive agents by at least one-half. Because of the possibility of progression of renal damage, periodic determination of the BUN is indicated. Discontinue if the BUN rises or liver dysfunction is aggravated. Hepatic coma may be precipitated.

Electrolyte imbalance, sodium and/or potassium depletion may occur. If potassium depletion should occur during therapy, the drug should be discontinued and potassium supplements given, provided the patient does not have marked oliguria.

Take special care in cirrhosis or severe ischemic heart disease and in patients receiving corticosteroids, ACTH, or digitalis. Salt restriction is not recommended.

Adverse Reactions: Nausea, gastric irritation, vomiting, anorexia, constipation and cramping, dizziness, weakness, restlessness, hyperglycemia, glycosuria, hyperuricemia, headache, muscle cramps, orthostatic hypotension, which may be potentiated when chlorthalidone is combined with barbiturates, narcotics or alcohol, aplastic anemia, leukopenia, thrombocytopenia, agranulocytosis, impotence, dysuria, transient myopia, skin rashes, urticaria, purpura, necrotizing angiitis, acute gout, and pancreatitis when epigastric pain or unexplained G.I. symptoms develop after prolonged administration. Other reactions reported with this class of compounds include: jaundice, xanthopsia, paresthesia, and photosensitization.

Average Dosage: 50 or 100 mg. with breakfast daily or 100 mg. every other day.

Availability: White, single-scored tablets of 100 mg. and aqua tablets of 50 mg., in bottles of 100 and 1000.

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By helping to remove dead tissue and debris from the ulcer's surface, ELASE Ointment creates a better environment for the elimination of infection, for healthy granulation... *for healing.* Its lytic enzymes effectively break down DNA in dead leukocytes and other debris... the fibrin in blood clots, serum, and purulent exudates... and the denatured proteins in necrotic tissue. Protein elements of *living* tissue are relatively unaffected. ELASE Ointment is indicated in stasis ulcers and in other infected or inflamed ulcers caused by circulatory disturbances. In cases requiring skin grafting, it is used preoperatively for debridement. For ambulatory patients debridement with ELASE Ointment is a convenient therapy and a regimen likely to be followed. *Precautions:* Observe usual precautions against allergic reactions, particularly in persons with a history of sensitivity to materials of bovine origin or to mercury compounds. *Adverse Reactions:* Side effects attributable to the enzymes have not been a problem at the dose and for the indications recommended. *Discussion:* Successful use of enzymatic debridement depends on several factors: (1) dense, dry eschar, if present, should be removed surgically before enzymatic debridement is attempted; (2) the enzyme must be in constant contact with the substrate; (3) accumulated necrotic debris must be periodically removed; (4) the enzyme must be replenished at least once daily; and (5) secondary closure or skin grafting must be employed as soon as possible after optimal debridement has been attained. It is further essential that wound-dressing techniques be performed carefully under aseptic conditions and that appropriate systemically acting antibiotics be administered concomitantly if, in the opinion of the physician, they are indicated. *Available:* ELASE Ointment is supplied in 30-Gm. tubes containing 30 units (Loomis) of fibrinolysin and 20,000 units of desoxyribonuclease with 0.12 mg. thimerosal (mercury derivative); and in 10-Gm. tubes containing 10 units of fibrinolysin and 6,666 units of desoxyribonuclease with 0.04 mg. thimerosal. ELASE Ointment has a special base of liquid petrolatum and polyethylene; contains sodium chloride and sucrose used during manufacture; is stable at room temperature through the expiration date stated on the package.

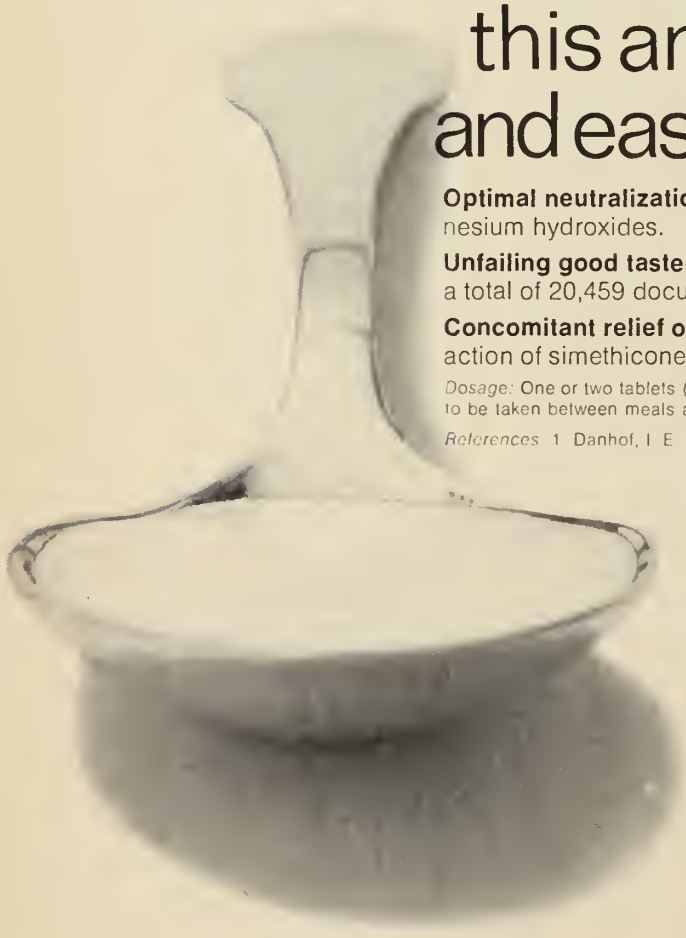
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Optimal neutralization—provided by the combination of aluminum and magnesium hydroxides.

Unfailing good taste—confirmed by 87.5% of 104 patients in one study, after a total of 20,459 documented days on Mylanta Liquid or tablets.[1]

Concomitant relief of G. I. gas distress—provided by the proven antiflatulent action of simethicone.[2]

Dosage: One or two tablets (well chewed or allowed to dissolve in the mouth); one or two teaspoonfuls to be taken between meals and at bedtime, or as directed by physician.

References 1 Danhof, I E Report on file 2 Hoon, J R Arch. Surg. *93*:467 (Sept.) 1966.

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Each tablet contains: ACHROMYCIN® Tetracycline HCl 125 mg.; Phenacetin 120 mg.; Caffeine 30 mg.; Salicylamide 150 mg.; Chlorothen citrate 25 mg.

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For children and elderly patients you may prefer caffeine-free ACHROCIDIN Syrup. Each 5 cc contains: ACHROMYCIN (Tetracycline) equivalent to Tetracycline HCl 125 mg.; Phenacetin 120 mg.; Salicylamide 150 mg.; Ascorbic Acid (C) 25 mg.; Pyrilamine Maleate 15 mg.

Contraindications: Hypersensitivity to any component.

Warning: In renal impairment, since liver toxicity is possible, lower doses are indicated; during prolonged therapy consider serum level determinations. Photodynamic reaction to sunlight may occur in hypersensitive persons. Photosensitive individuals should avoid exposure; discontinue treatment if skin discomfort occurs.

Precautions: Drowsiness, anorexia, slight gastric distress can occur. In excessive drowsiness, consider longer dosage intervals. Persons on full dosage should not operate vehicles. Nonsusceptible organisms may overgrow; treat superinfection appropriately. Treat beta-hemolytic streptococcal infections at least 10 days to help prevent rheumatic fever or acute glomerulonephritis. Tetracycline may form a stable calcium complex in bone-forming tissue and may cause dental staining during tooth development (last half of pregnancy, neonatal period, infancy, early childhood).

Adverse Reactions: *Gastrointestinal*—anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis, pruritus ani. *Skin*—maculopapular and erythematous rashes; exfoliative dermatitis; photosensitivity; onycholysis, nail discoloration. *Kidney*—dose-related rise in BUN. *Hypersensitivity* reactions—urticaria, angioneurotic edema, anaphylaxis. *Intracranial*—bulging fontanels in young infants. *Teeth*—yellow-brown staining; enamel hypoplasia. *Blood*—anemia, thrombocytopenic purpura, neutropenia, eosinophilia. *Liver*—cholestasis at high dosage.

Upon adverse reaction, stop medication and treat appropriately.

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The go-ahead-and-enjoy-your-vacation summer cold and allergy pill.

Novahistine LP lets you provide effective relief of summer cold and allergy symptoms, lets your patients go ahead and enjoy their vacations.
These continuous-release, decongestant tablets contain a vasoconstrictor-antihistamine formulation that goes to work promptly and lasts for hours. Even the nasal congestion resulting from repeated allergic episodes can usually be relieved by Novahistine LP.

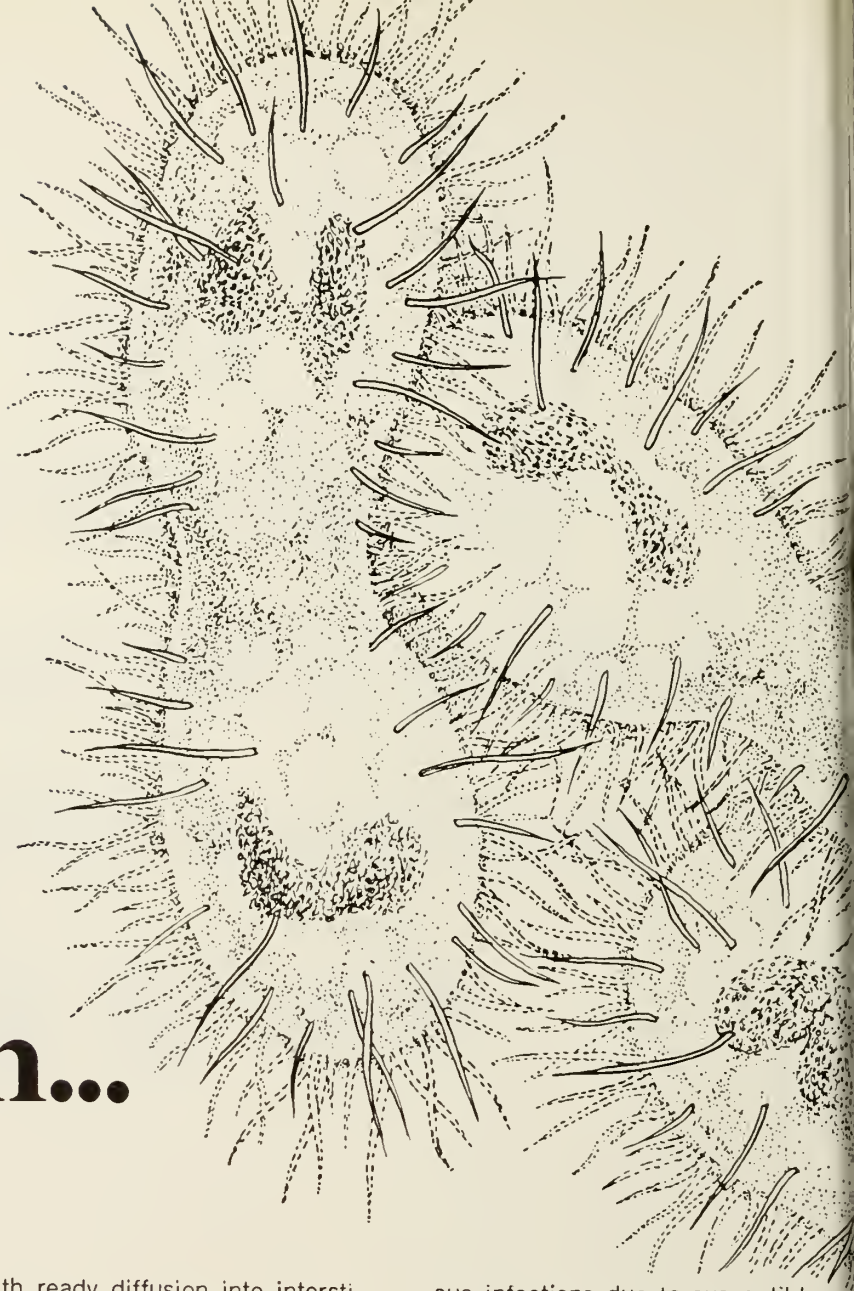
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(Each tablet contains 25 mg. of phenylephrine hydrochloride and 4 mg. of chlorpheniramine maleate.)

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Recently it has been estimated that about 86 per cent of positive cultures in first attacks of urinary tract infection are *E. coli*.[1] It has also been noted that "The coliform group, especially *E. coli*, accounts for approximately 90 per cent of initial infections...."[2]

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Gantanol also earns its high "index of confidence" because Gantanol therapy is relatively free from complications, including the problem of bacterial resistance or superinfection.

Convenient, economical dosage schedule: *b.i.d.*

References: 1. Vernier, R. L., in Patient Care Feature: *Patient Care, 1*:20 (Feb.) 1967. **2.** Beeson, P. B.: "The Infectious Diseases," in Beeson, P. B., and McDermott, W. (eds.): *Cecil-Loeb Textbook of Medicine*, ed. 12, Philadelphia, W. B. Saunders Company, 1967, p. 230.

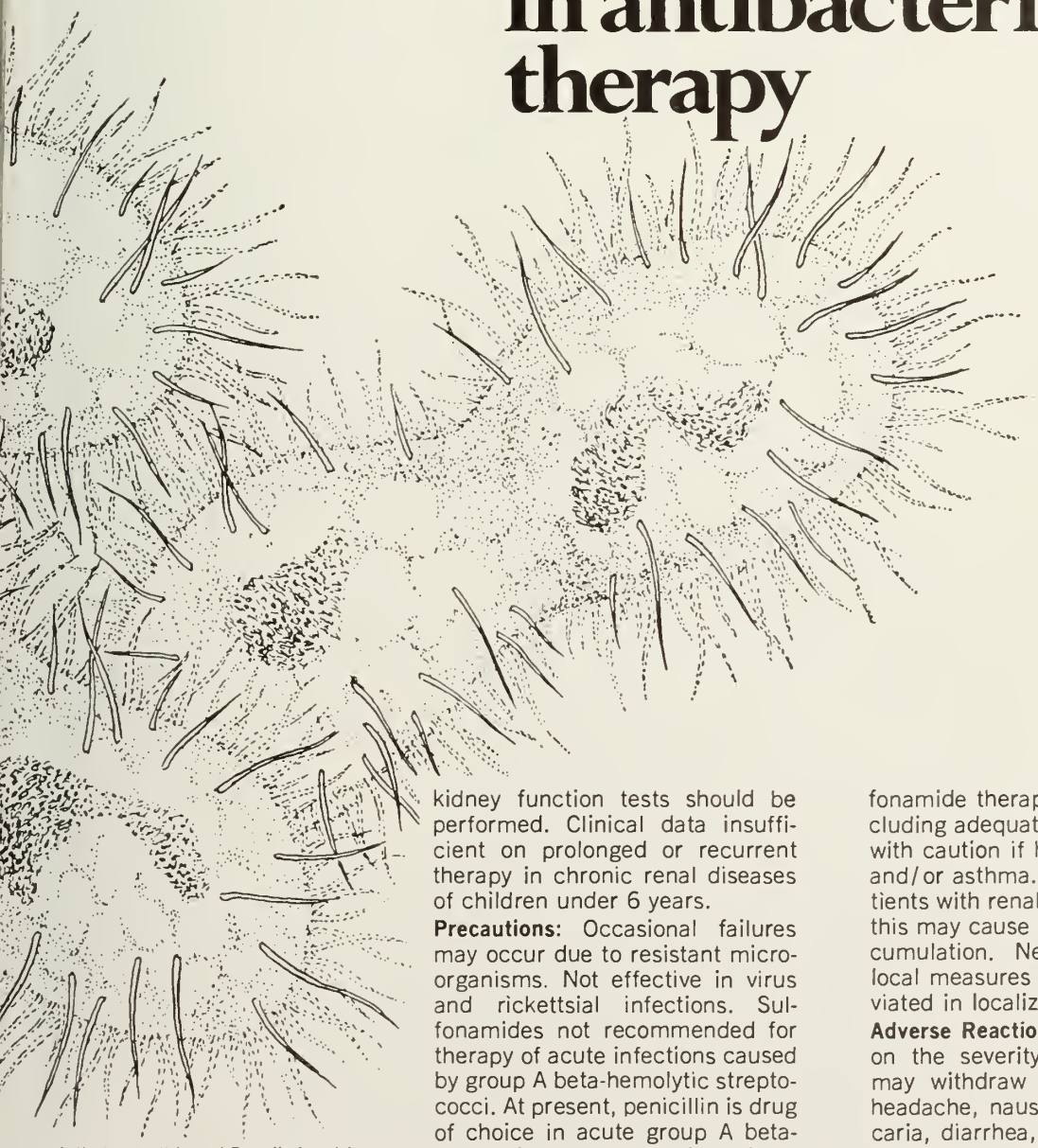
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Indications: Acute and chronic urinary tract, respiratory and soft tissue infections due to susceptible microorganisms; prophylactically following diagnostic instrumental procedures on genitourinary tract.

Contraindicated in sulfonamide-sensitive patients, pregnant females at term, premature infants, or newborn infants during first 3 months of life.

Warnings: Use only after critical appraisal in patients with liver or renal damage, urinary obstruction or blood dyscrasias. Deaths reported from hypersensitivity reactions, Stevens-Johnson syndrome, agranulocytosis, aplastic anemia and other blood dyscrasias. In closely intermittent or prolonged therapy, blood counts and liver and

For a high index of confidence... Gantanol® (sulfamethoxazole) in antibacterial therapy



Artist's rendition of E. coli. As with most strains of E. coli, these have flagella and are motile.

kidney function tests should be performed. Clinical data insufficient on prolonged or recurrent therapy in chronic renal diseases of children under 6 years.

Precautions: Occasional failures may occur due to resistant microorganisms. Not effective in virus and rickettsial infections. Sulfonamides not recommended for therapy of acute infections caused by group A beta-hemolytic streptococci. At present, penicillin is drug of choice in acute group A beta-hemolytic streptococcal infections; although Gantanol has produced favorable bacteriologic conversion rates in this infection, data insufficient on long-term follow-up studies as to its effect on sequelae of rheumatic fever or acute glomerulonephritis. If other treatment cannot be used and Gantanol is employed in such infections, *important that therapy be continued in usual recommended dosage for at least 10 days*. Observe usual sulfonamide therapy precautions, including adequate fluid intake. Use with caution if history of allergies and/or asthma. Follow closely patients with renal impairment since this may cause excessive drug accumulation. Need for indicated local measures or surgery not obviated in localized infections.

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As physicians have found during nearly 15 years of widespread use, Equanil may be a beneficial part of aftercare. It helps relieve anxiety and tension, thus often aiding your primary therapy.

Indications: For use in management of anxiety and tension occurring alone or as accompanying symptom complex to medical and surgical disorders and procedures. Though not a hypnotic, fosters normal sleep through antianxiety and related muscle-relaxant properties.

Contraindications: History of sensitivity to meprobamate.

Important Precautions: Carefully supervise dose and amounts prescribed, especially for patients prone to overdose themselves. Excessive prolonged use has been reported to result in dependence or habituation in susceptible persons, as alcoholics, ex-addicts, and other severe psychoneurotics. After prolonged excessive dosage, reduce dosage gradually to avoid possibly severe withdrawal reactions. Abrupt discontinuance of excessive doses has sometimes resulted in epileptiform seizures.

Warn patients of possible reduced alcohol tolerance, with resultant slowing of reaction time and impairment of judgment and coordination.

Reduce dose if drowsiness, ataxia or visual disturbance occurs; if persistent, patients should not operate vehicles or dangerous machinery.

Side Effects include drowsiness, usually transient; if persistent and associated with ataxia, usually responds to dose reduction; occasionally concomitant CNS stimulants (amphetamine, mephentermine sulfate) are desirable. Allergic or idiosyncratic reactions are rare, but such reactions, sometimes severe, can develop in patients receiving only 1 to 4 doses who have had no previous contact with meprobamate. Previous history of allergy may or may not be related to incidence of reactions. Mild reactions are characterized by itchy urticarial or erythematous maculopapular rash, generalized or confined to groin. Acute nonthrombocytopenic purpura with cutaneous petechiae, ecchymoses, peripheral edema and fever have been reported. One fatal case of bullous dermatitis following intermittent use of meprobamate with prednisolone has been reported. If allergic reaction occurs, meprobamate should be stopped and not reinstituted. Severe reactions, observed very rarely, include angioneurotic edema, bronchial spasms, fever, fainting spells, hypotensive crises (1 fatal case), anaphylaxis, stomatitis and proctitis (1 case) and hyperthermia. Treat symptomatically as with epinephrine, antihistamine and possibly hydrocortisone. Aplastic anemia (1 fatal case), thrombocytopenic purpura, agranulocytosis and hemolytic anemia have occurred rarely, almost always in presence of known toxic agents. A few cases of leukopenia, usually transient, have been reported on continuous administration.

Meprobamate may sometimes precipitate grand mal attacks in patients susceptible to both grand and petit mal. Extremely large doses can produce rhythmic fast activity in the cortical pattern. Impairment of accommodation and visual acuity has been reported rarely. After excessive dosage for weeks or months, withdraw gradually (1 or 2 weeks) to avoid recurrence of pretreatment symptoms (insomnia, severe anxiety, anorexia). Abrupt discontinuance of excessive doses has sometimes resulted in vomiting, ataxia, tremors, muscle twitching and epileptiform seizures. Prescribe very cautiously and in small amounts for patients with suicidal tendencies. Suicidal attempts have resulted in coma, shock, vasomotor and respiratory collapse and anuria. Excessive doses have resulted in prompt sleep; reduction of blood pressure, pulse and respiratory rates to basal levels; and occasionally hyperventilation. Treat with immediate gastric lavage and appropriate symptomatic therapy. (CNS stimulants and pressor amines as indicated.) Doses above 2400 mg./day are not recommended.

Composition: Tablets, 200 mg. and 400 mg. meprobamate. Coated Tablets, WYSEALS® EQUANIL (meprobamate) 400 mg. (All tablets also available in REDIPAK® [strip pack], Wyeth.) Continuous-Release Capsules, EQUANIL L-A (meprobamate) 400 mg.

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(meprobamate)

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This patient may appear to "have everything" but, like so many people getting along in years, she may well be in need—*medically*. Though there is no evidence of organic disease, she does have symptoms (fatigue, vague aches and pains, malaise) that may be indicative of—

a need to maintain anabolic balance... to counteract declining gonadal hormone secretion and forestall premature degenerative changes related to estrogen deficiency;

a need for mood elevation... to impart a gentle emotional uplift;

a need for nutritional supplementation... to compensate for the poor eating habits and subsequent dietary insufficiency of so many older people.

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MEDIATRIC provides specific agents to fulfill a need in the three areas:

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Methamphetamine HCl	1.0 mg.	1.0 mg.
Cyanocobalamin	2.5 mcg.	1.5 mcg.
Intrinsic factor concentrate	8.0 mg.	—
Thiamine HCl	—	5.0 mg.
Thiamine mononitrate	10.0 mg.	—
Riboflavin	5.0 mg.	—
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		Contains 15% alcohol† †Some Loss Unavoidable.

Contraindication: Carcinoma of the prostate, due to methyltestosterone component.

Warning: Some patients with pernicious anemia may not respond to treatment with the Tablets or Capsules, nor is cessation of response predictable. Periodic examinations and laboratory studies of pernicious anemia patients are essential and recommended.

Side Effects: In addition to withdrawal bleeding, breast tenderness or hirsutism may occur.

Suggested Dosages: *Male and female*—1 Tablet or Capsule, or 3 teaspoonfuls Liquid, daily or as required.

In the female: To avoid continuous stimulation of breast and uterus, cyclic therapy is recommended (3 week regimen with 1 week rest period—Withdrawal bleeding may occur during this 1 week rest period).
In the male: A careful check should be made on the status of the prostate gland when therapy is given for protracted intervals.

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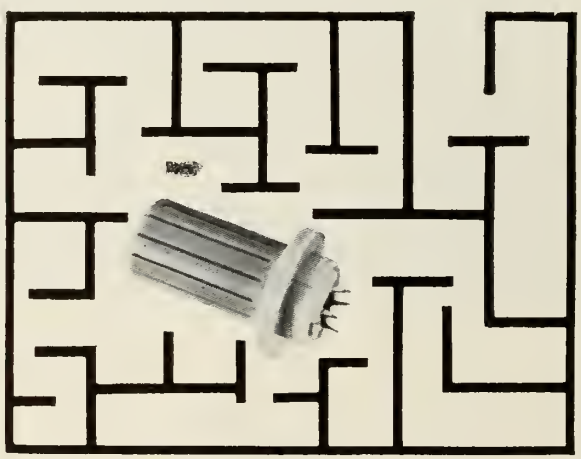
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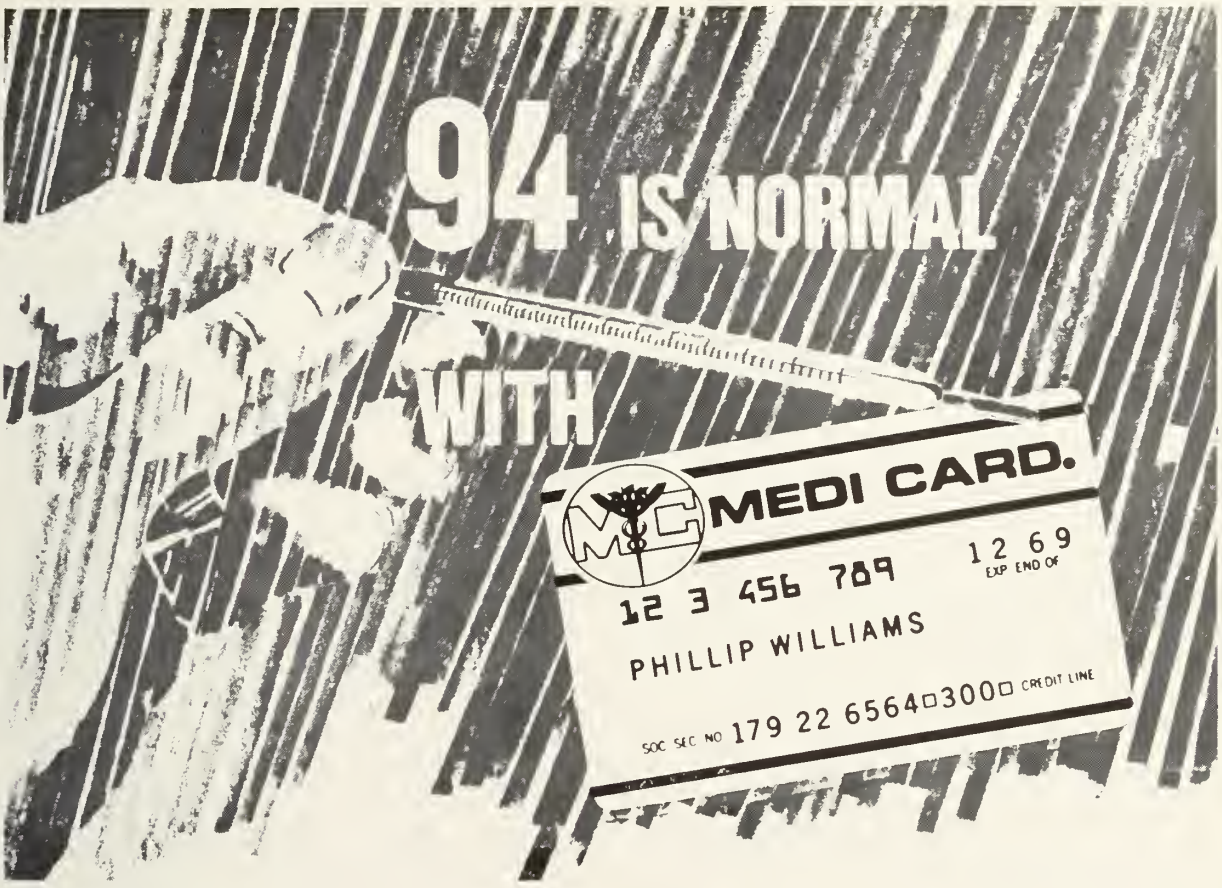
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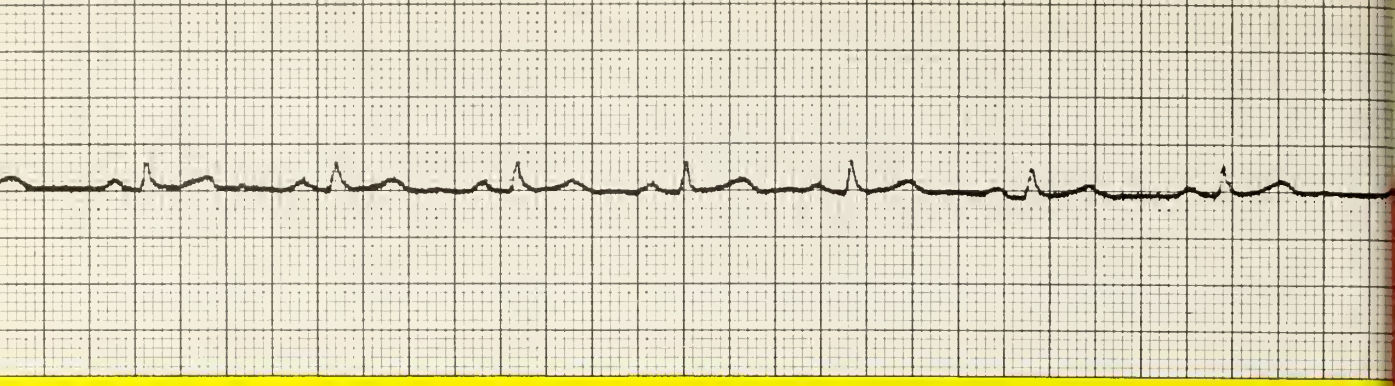
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Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

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THE JOURNAL
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VOLUME 60 JULY, 1969 NUMBER 7

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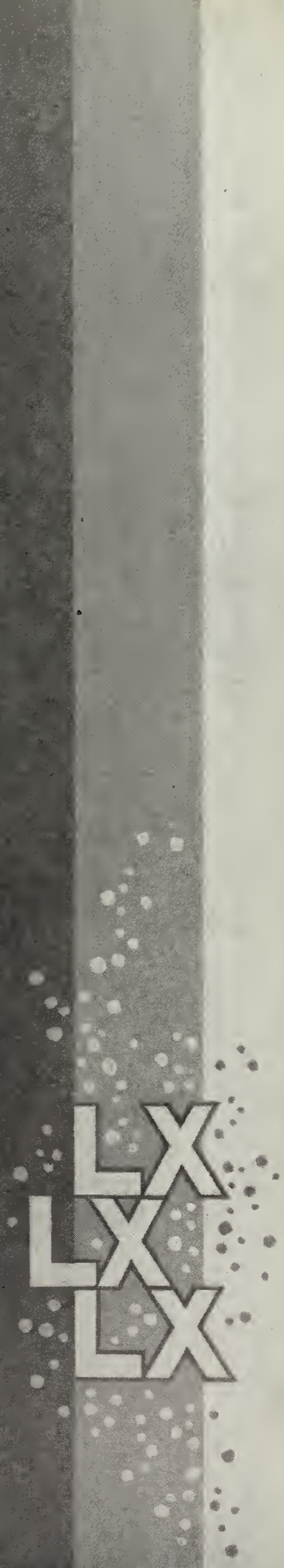
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(1) Siver, R. H.: CMD, *21*:109, September 1954. (2) Frykman, H. H.: Minn. Med., *38*:19-27, January 1955. (3) McGivney, J.: Tex. State Jour. Med., *51*:16-18, January 1955. (4) Quehl, T. M.: Jour. of Florida Acad. Gen. Prac., *15*:15-16, October 1965. (5) Weekes, D. J.: N.Y. State Jour. Med., *58*:2672-2673, August 1958. (6) Weekes, D. J.: EENT Digest, *25*:47-59, December 1963. (7) Abbott, P. L.: Jour. Oral Surg., Anes., & Hosp. Dental Serv., 310-312, July 1961. (8) Rapoport, L. and Levine, W. I.: Oral Surg., Oral Med. & Oral Path., *20*:591-593, November 1965.

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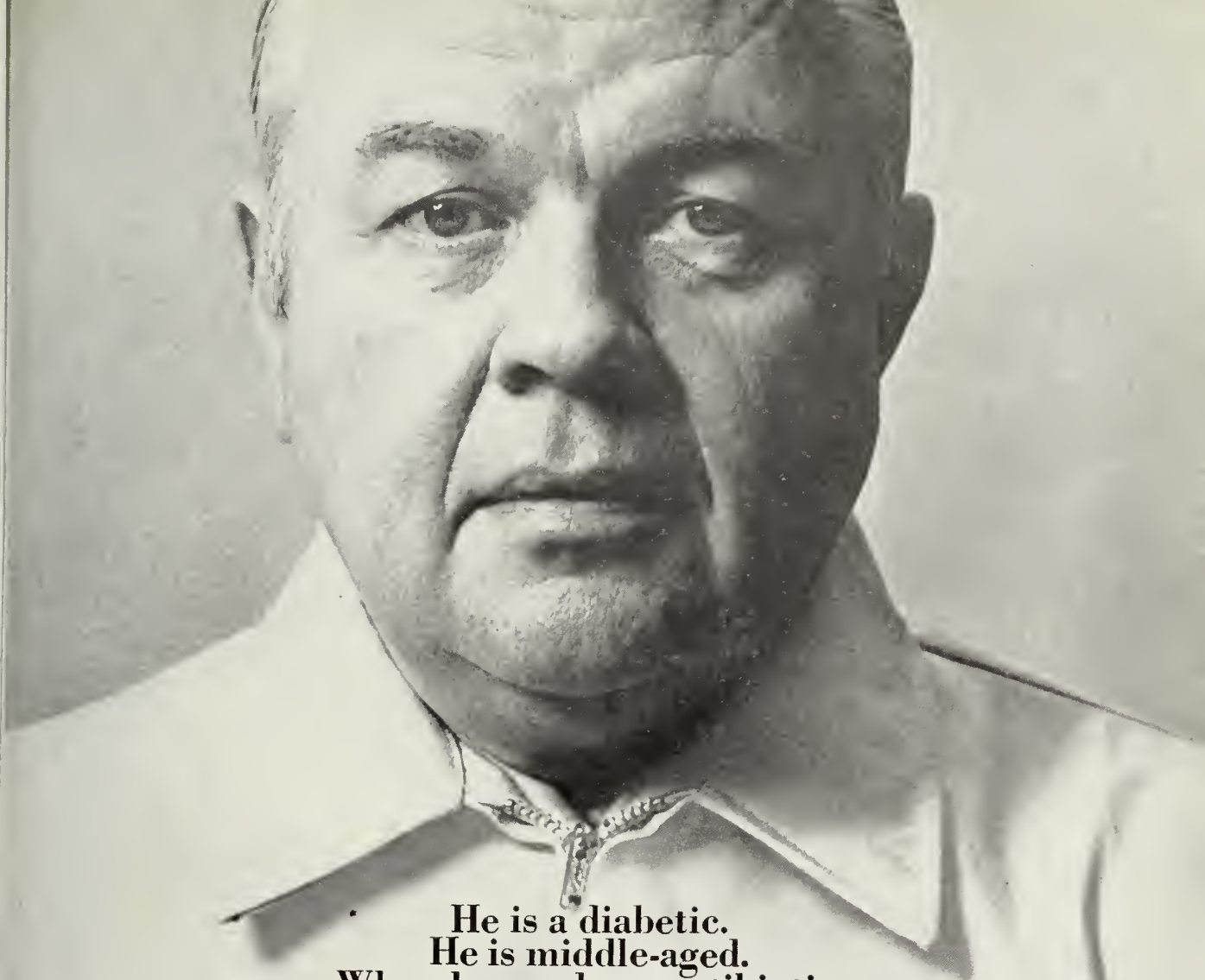
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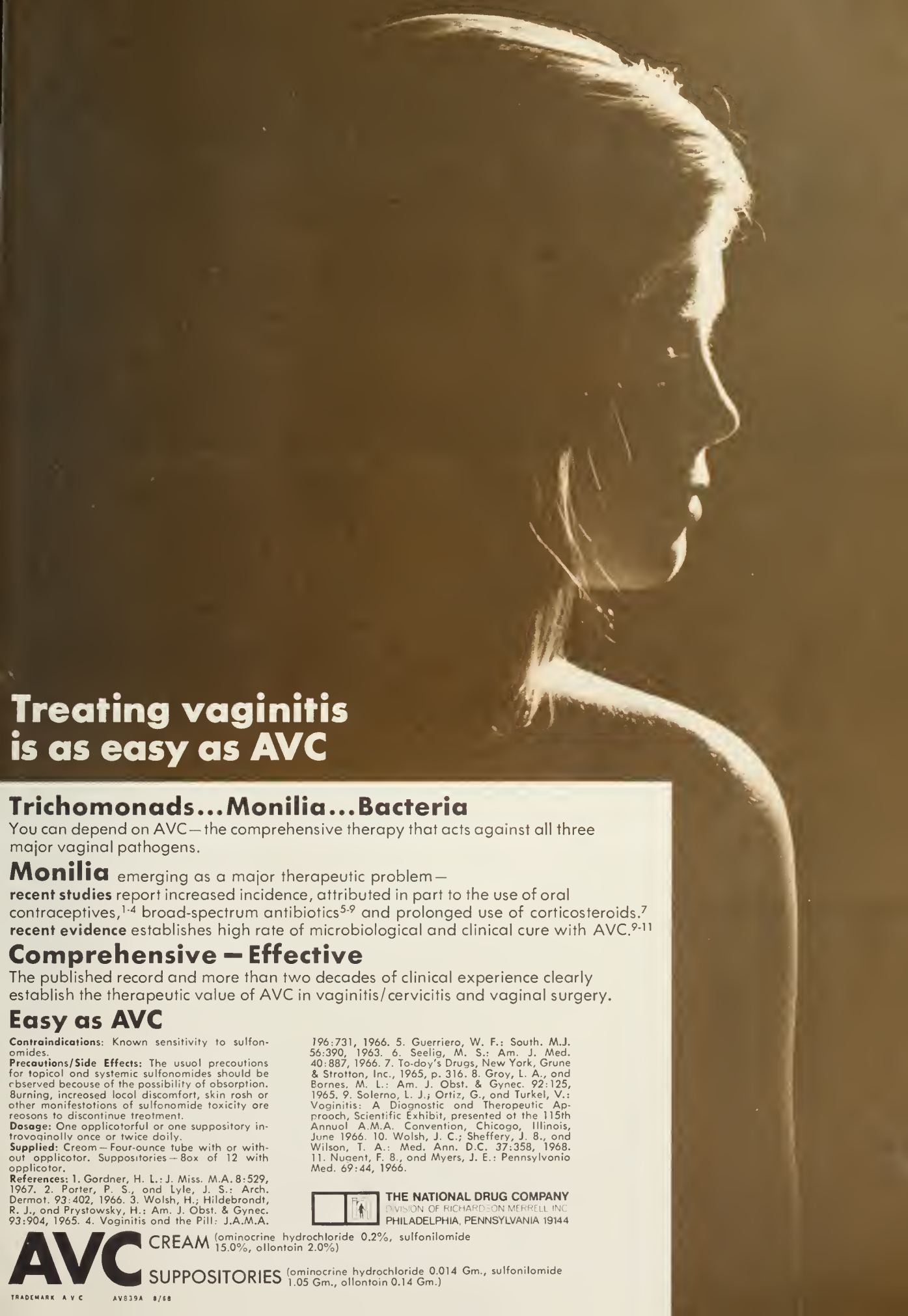
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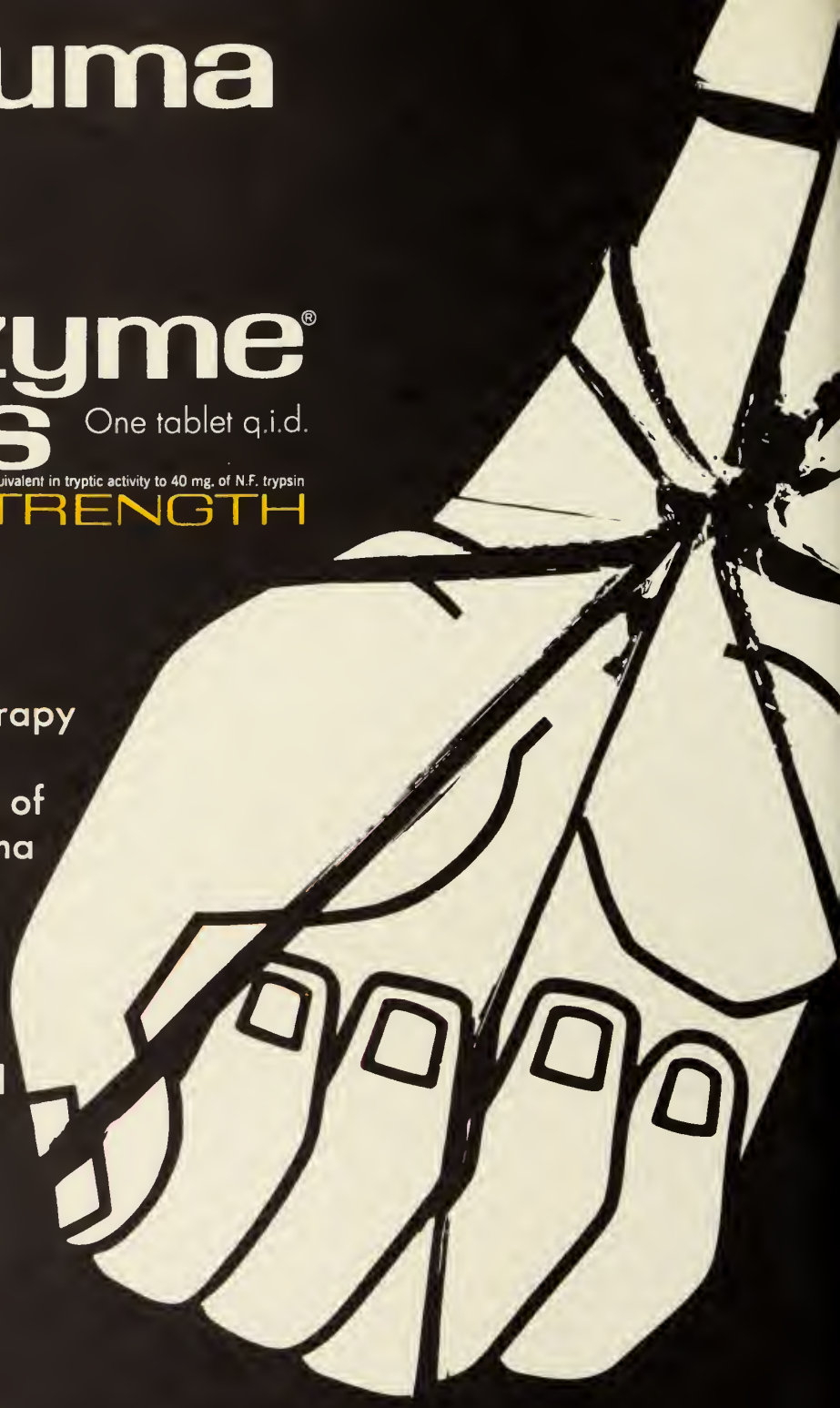
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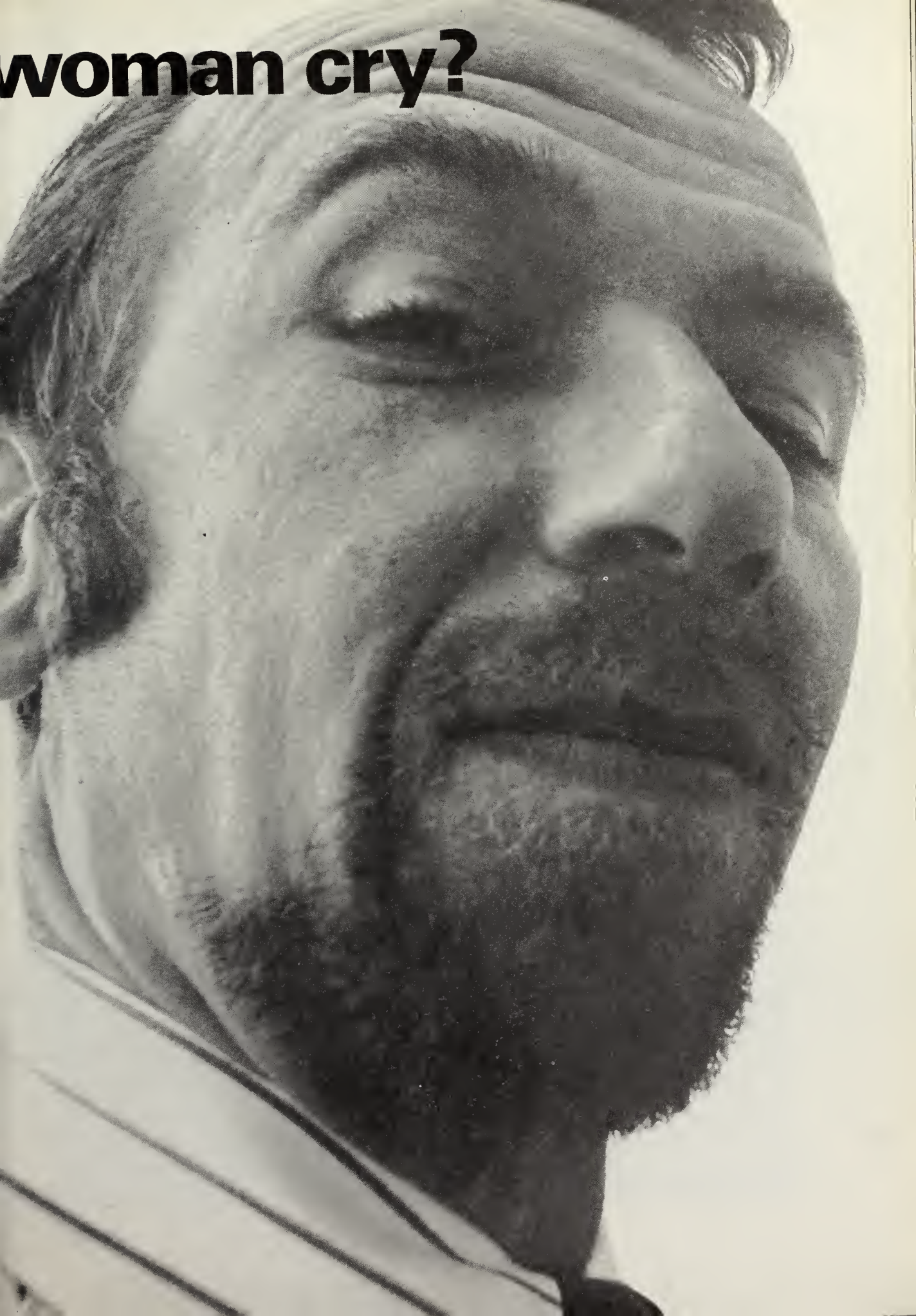
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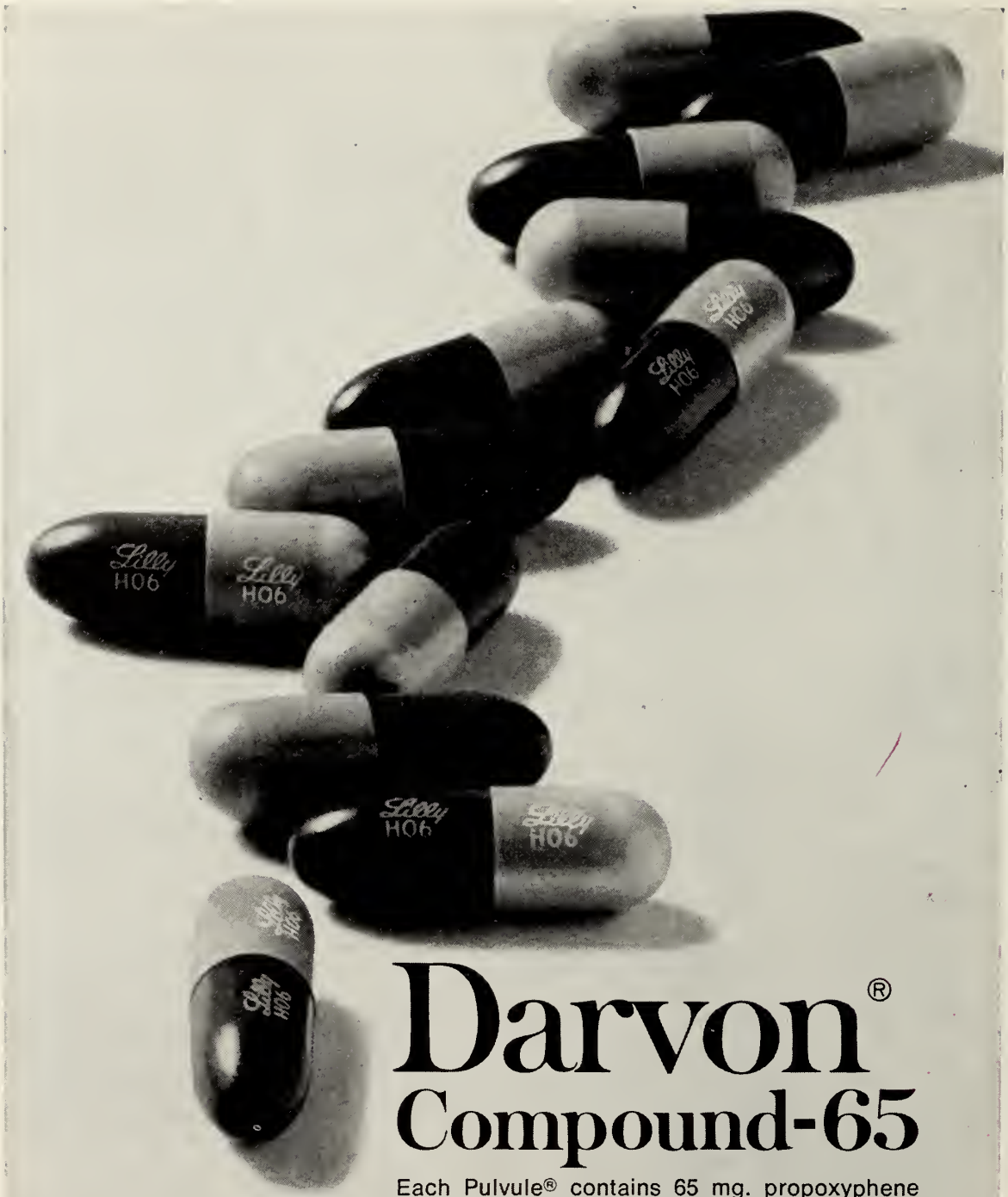
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Ball Variance and Systemic Embolization Following Aortic Valve Replacement by a Starr – Edwards Prosthesis

Peter F. Lansing, M.D.*

Eight years have passed since the development of the prosthetic mitral valve by Starr. Since then, cardiac valves have been replaced with great frequency especially in those patients who are threatened with severe cardiac failure. It was inevitable that complications would follow such drastic but life-saving surgery. The prolonged survival of a patient who developed the complications of ball variance and multiple cerebral emboli are described in this case report.

Case Report

This 58-year-old, white, male painter entered the Togus Veterans Administration Hospital on March 10, 1969, for investigation for subdural hematoma secondary to trauma. Four days prior to admission the patient had fallen and subsequent to this behavior had become erratic and he developed a fever.

In 1943, a heart murmur was discovered but there was no history of rheumatic fever. Signs of left-sided heart failure associated with easy fatigability developed after August 1962. During hospitalization at this Center because of congestive heart failure during the period March 22 through May 7, 1963, the murmurs of aortic stenosis, aortic regurgitation, and mitral stenosis were heard.

The patient's aortic valve was replaced on June 18, 1963, with an A-10 Starr-Edwards valve. Prior to surgery which was performed at the West Roxbury Veterans Hospital, West Roxbury, Massachusetts, cardiac catheterization revealed an aortic gradient of 70 mm. of mercury and a calculated aortic valve area of 0.436 sq. cm. There were no peripheral signs of aortic regurgitation although the characteristic murmur of aortic regurgitation superimposed on a very loud murmur of aortic stenosis was present. The coronary vessels were normal on angiography.

Findings at the time of surgery consisted of an extremely dilated aorta associated with a systolic thrill and some aortic wall collapse in diastole. The aortic valve was bicuspid and there was considerable calcification along the base of the right coronary cusp, neutral cusp, and the intervening commissure. The stenosis was due to fusion between the commissure of the neutral and right coronary cusps. The area of stenosis was not severe permitting passage of the tip of a finger. The commissure between the neutral and left coronary cusps was open. The surgeon felt that aortic regurgitation was the predominant lesion. The aortic valve was excised with some difficulty because of the calcification. An A-10 Starr-Edwards valve was sewn in place using approximately 21 No. 2-0 silk sutures through the remaining fringe of the cusps and as much of the annulus as could be approximated with the suture. The sutures were in moderately firm tissue except in the region of the right coronary cusp where the aortic wall and the ventricular muscle presented no fibrous base. The postoperative course was complicated by development of fever and mild recurring congestive failure. Both complications responded well to treatment with penicillin, streptomycin, and meralluride (Mercuhydrin®). Three months and six months after surgery the patient complained of dyspnea on exertion. Six months after surgery he noted easy fatigability at which time auscultation revealed a loud systolic murmur and a loud click at the base of the Starr-Edwards valve. There was no diastolic murmur. The same complaints continued at the fifteen month interval and in addition the patient described chest pain on moderate activity. No change in the heart sounds was described.

In September 1964, the patient experienced a 12-hour episode of numbness of the right upper and lower extremities associated with difficulty in speaking but not combined with any localized motor extremity weakness. In November 1964, the patient developed sudden numbness of the left upper and lower extremities followed by weakness of the left upper extremity. These symptoms appeared over a period of hours. Brief periods of memory loss were noted by the patient on 20 to 25 occasions beginning in March 1964. Anticoagulant therapy with warfarin sodium was said to have been adequate; however, prothrombin times were obtained once a month at a local hospital. During hospitalization at the Togus Veterans Administration Hospital in April 1965 because of contact dermatitis, a prothrombin time of 88% on the first hospital day was reported.

Another episode of numbness involving the right upper and lower extremities associated with speech difficulties occurred later in the Spring of 1965 and in the early months of 1967 the patient had three separate bouts of transient numbness involving the right forearm and hand. In August 1967, the patient developed an incomplete expressive aphasia and weakness of the right upper extremity. This episode was preceded by jerking

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movements of the right leg. He was hospitalized at the Togus Veterans Hospital that month. The initial prothrombin times were not in the therapeutic range. No diastolic murmur was present. The heart was enlarged by palpation and x-ray examination. There was at least one period of mental confusion. Two spinal fluid examinations were unsatisfactory (traumatic taps). In October 1967, the patient experienced another period of right upper extremity paresis. In mid-February 1969, the patient had a grand mal seizure. Physical examination during the final admission to the Togus Veterans Hospital on March 10, 1969, revealed aphasia, weakness of the right upper and lower extremities, a positive Babinski's sign on the right and an ecchymotic area over the left mastoid bone.

On the second hospital day, personnel noted at least five brief grand mal seizures which were treated successfully with diazepam (Valium®). The spinal fluid examination revealed xanthochromic fluid which was under elevated pressure. Subsequently, the patient remained responsive until the 15th hospital day when he developed a brief period of unconsciousness and apparent left facial weakness and rigidity of the left side of the body. Later in the same day he had several seizures involving the right upper extremity. A grand mal seizure which lasted 90 seconds occurred during the morning of the 16th hospital day. Subsequently, seizures which involved the right upper extremity recurred. A repeat examination of the spinal fluid revealed clear fluid under normal pressure which contained 54 mg. of protein and no cells. Pertinent diagnostic studies revealed no anemia, no leukocytosis, and no growth of organisms in multiple cultures of the patient's blood and one culture of his spinal fluid. There was no displacement of the Starr-Edwards valve on a portable chest x-ray film. A brain scan and an x-ray of the skull was normal. The electrocardiogram revealed a left ventricular hypertrophy pattern. Temperature elevations up to 103° F. were present on the first through the third hospital day and again on the fifteenth and sixteenth hospital days. No anticoagulant therapy was given during the final hospital admission. The patient became oliguric and died at 5:45 p.m. on the 16th hospital day.

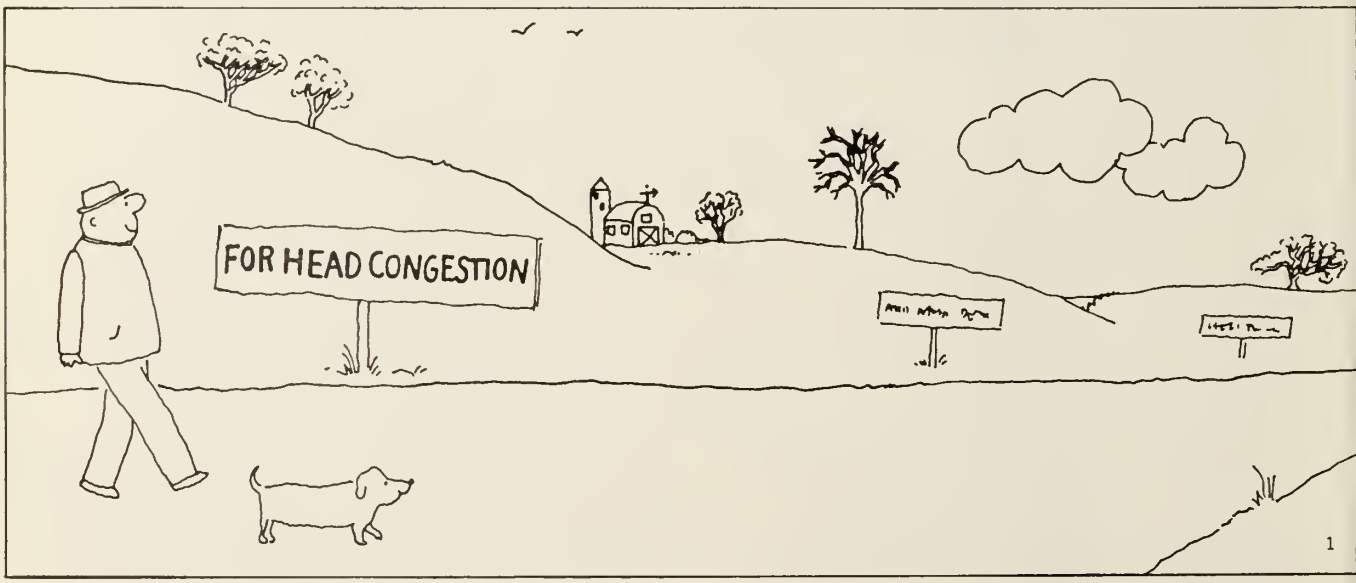
At autopsy undertaken 17 and one-half hours after death, the silastic ball of the Starr-Edwards valve appeared opaque and yellow and contained a long deep fissure in which was imbedded the corresponding strut of the Starr-Edwards cage. The strut had worn into the fissure to a depth of 2 mm. and appeared to impair the free movement of the silastic ball. A layer of thrombotic, friable material extended into the fissure (Fig. 1). The other two struts had produced corresponding grooves in the silastic ball. There was a considerable amount of friable thrombotic material adjoining the rim of the prosthetic valve (Fig. 2). Other cardiac pathology consisted of left ventricular hypertrophy, postoperative pericardial adhesions, and an old healed posteroseptal myocardial infarct. The coronary arteries were moderately arteriosclerotic but were free to actual occlusions.

The scalp revealed a contusion of the left vertex. There was an accumulation of fresh blood clots along the longitudinal sinus which spread into the longitudinal sulcus. There was a large triangular area of softening extending from the cortex to the left frontoparietal lobe into the internal capsule and left basal ganglia. A separate area of softening involved the left occipital lobe. The cerebral arteries revealed only slight sclerosis but no actual occlusions. Old healed infarcts were present in both kidneys and spleen. No giant cell granulomata were present in the liver. The liver, spleen, and lungs revealed gross and microscopic changes compatible with longstanding heart failure.

Discussion

Ball variance is the term used to describe the development of erosion or fracture of the silastic ball formerly used in the Starr-Edwards valve.[1] The alterations of the silastic material consist of loss of translucency, yellowish discoloration, change of consistency (i.e., either increased or decreased loss of sphericity), weight changes, changes in the volume of the ball, changes of the surface of the ball with scratches, furrows or fissures, modification of the mobility of the ball and lipidic impregnations.[2] Fracture of the ball and escape from the cage with wide dissemination of the ball material into the systemic circulation can produce a foreign body granulomatous reaction in various body organs.[3] One group of authors has advocated liver biopsy to determine the presence of hepatic granulomata indicative of embolization of ball material when this is suspected.[3] At autopsy, dislodged balls have been found at the bifurcation of the abdominal aorta.[3,4] Ball variance occurred 24 months or longer after aortic valve replacement in a large series from the National Heart Institute.[5]

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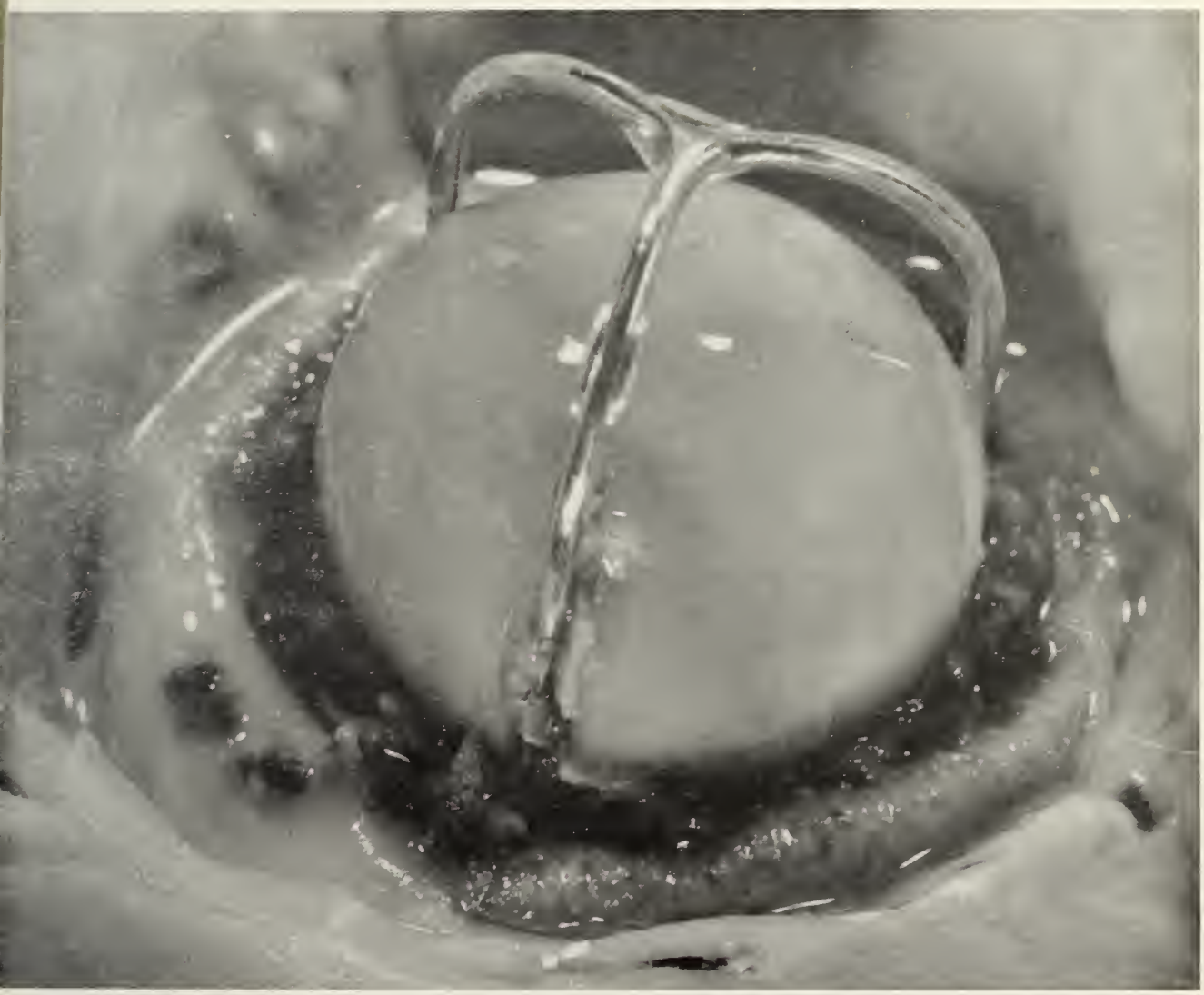
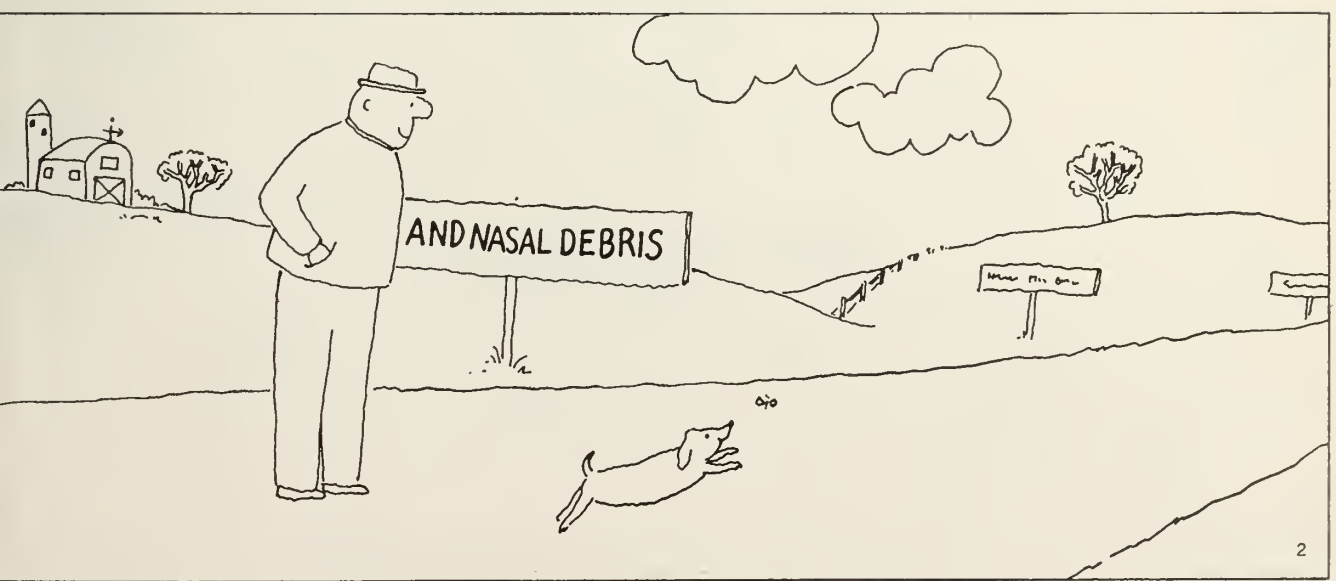


Fig. 1. Deep fissure produced by strut of Starr-Edwards valve.



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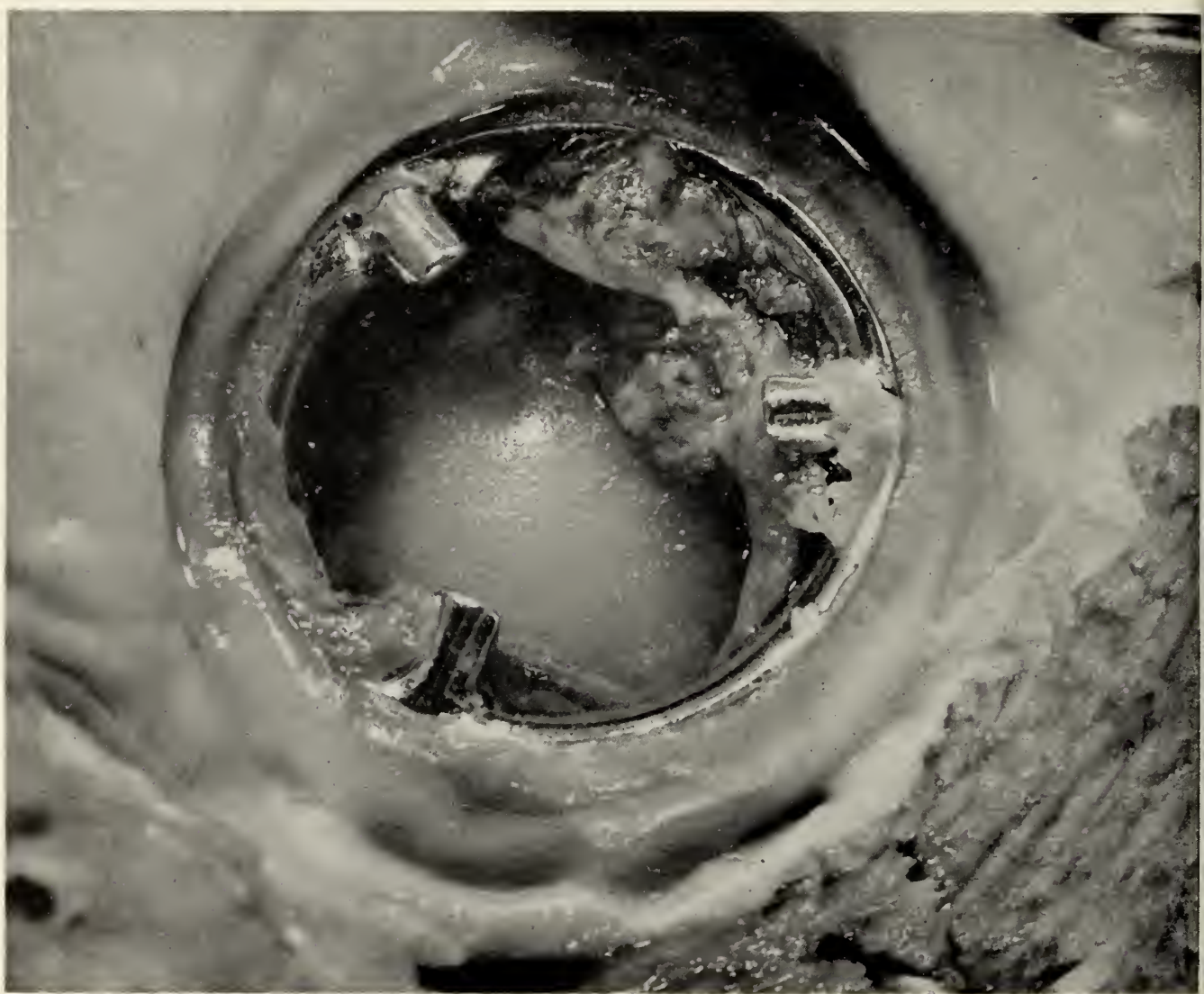


Fig. 2. Friable thrombotic material around rim of prosthetic valve.



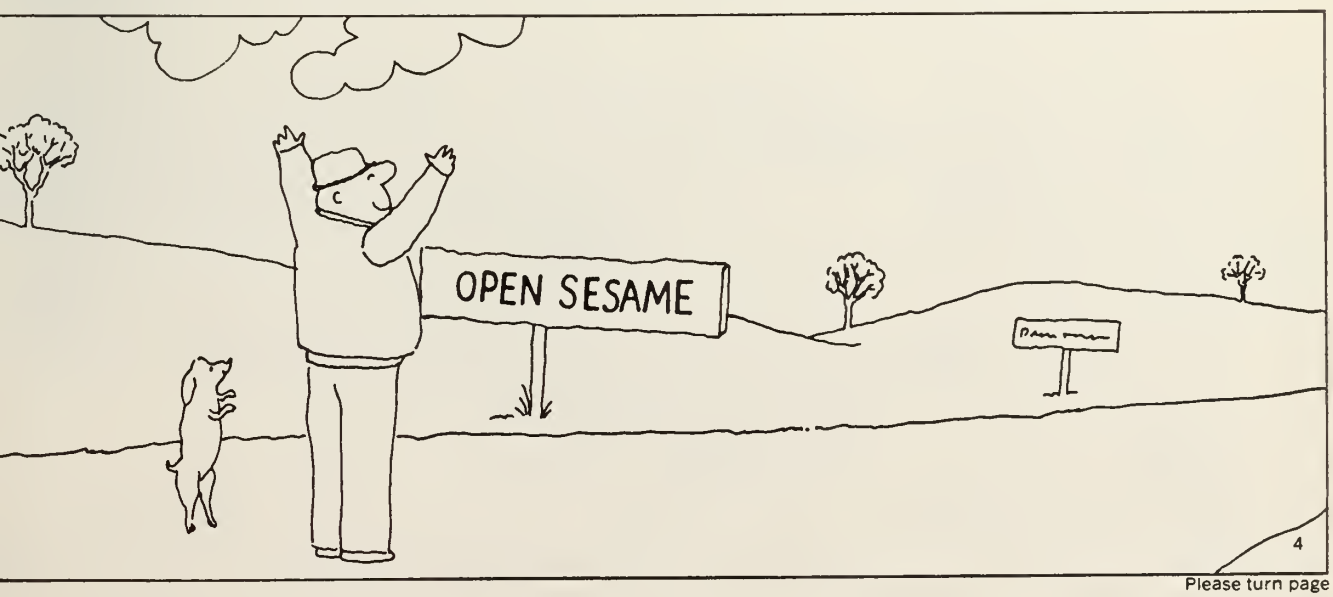
All variant balls examined by the Edwards Laboratories have contained lipids which apparently make the silicone rubber susceptible to wear. These lipids are extractable and the rubber returns to a near normal state afterward.[5] These complications had been most frequent when some difficulty occurred at the original implantation of the prosthesis such as insertion of the valve in a distorted position preventing free spinning of the ball with subsequent unequal wear of the surface.[1] Mechanical defects and color changes have been common in balls in aortic valve locations. There the aortic ball valve is not moved until ventricular contraction at high velocity is capable of unseating the ball. Abrupt arrest of forward motion is due to striking three thin struts, not necessarily simultaneously. Throughout systole the ball is subjected to rotation, deformation, and pummeling by turbulent blood flow at high velocity. Diastolic seating is forceful.[6] In contrast, the Starr-Edwards prosthesis in a mitral site is seated at a low velocity and pressure against a broad metal surface and mechanical defects and color changes in the ball in this location are uncommon.[6] The frightening feature of ball degeneration is its clinical silence until sudden catastrophe occurs. There are several signs that may warn that ball variance is developing, the most ominous of which is the sudden appearance of a low-grade diastolic murmur. Starr has emphasized that a variation in the intensity of the normal click produced by seating of the ball in the prosthetic cage warms of ball variance.[1] Herr and associates[7] have relied on auscultation and phonocardiography as the best clinical indicators of ball degeneration. Thus, even if the patient is asymptomatic and the aortic opening click is absent or muffled or if the character of intensity of the opening sound is variable from beat to beat, they advocate re-operation with replacement of the ball or the entire prosthesis. It has been suggested that phonocardiograms for comparison in the intensity of the click[1] be obtained every six months following operation. The appearance of anemia or other signs of hemolysis such as abnormal red cell fragility, abnormal red cell survival, the presence of haptoglobins, and marked increase in reticulocyte activity are also helpful warning signs.[6] The introduction of the hollow metal ball (Stellite 21) in a prosthesis with fabric covered struts and orifice offers hope that ball degeneration will be eliminated. This modification was introduced in 1967 and has yet to be tested adequately and no conclusions concerning its superiority are justified at this time[5] although it is universally employed.[1]

Other complications following caged ball prostheses have consisted of thrombo-embolic episodes. It is customary to initiate Heparin therapy 4 to 5 days after surgery followed by sodium warfarin maintenance anticoagulation. The prothrombin time should be kept twice the normal range. The hazards of anticoagulant therapy are ever present; however, they are small compared to the risks of cerebral embolization. The thrombi dislodged from a prosthetic valve are usually small. Occlusion of major arteries such as the femoral or popliteal are uncommon but bouts of dizziness and confusion may herald cerebral embolization. Such episodes should be treated with Heparin during the immediate period and subsequently sodium warfarin therapy must be very carefully monitored.[1] Therapy should be continued for an indefinite period of time unless the patient goes to a remote area or otherwise cannot be adequately controlled.[8]

A thrombus forming on the prosthetic valve produces restriction of the ball motion and may cause complete obstruction of the valve orifice. Endocarditis may complicate this pathology.[9]

Coronary embolization rarely occurs. Barmeyer[9] speculates that the interaction of the ball with cage dislodges thrombi in the direction of the coronary ostia.

Appearance of an aortic sinus of Valsalva aneurysm in a heavy calcified valve was described by Angel de la Torre.[10] This was noted clinically 20 months after sur-



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gery and was presumed to be the origin of cerebral embolization. Najafi and DeWall[11] describe a patient who developed fatal obstruction of the aortic root by a Starr-Edwards prosthesis. A very small aortic root and marked aortic valve calcifications were encountered at surgery. A No. 8 aortic Starr-Edwards valve was placed. The patient died on the operating table. At autopsy, the aorta was found to encroach upon the superior aspect of the cage of the prosthesis so that with the valve in the open position the aorta was completely obstructed by the ball with no clearance for blood flow around it.[11] Aortic insufficiency can occur from several months to years after initial placement of a ball valve prosthesis. The region of the commissure between the right and left coronary cusps is the weak area of the aortic root. Sutures placed in that area must be close together otherwise they may cut through the annulus, become infected, and may produce false aneurysms at the site of suture. These defects can be repaired locally if no infection is present, otherwise a new prosthesis is placed.[12]

Perivalvular leaks about the rim of the prosthesis of the aortic valve are unusual as the annulus is better developed in the aortic area in comparison with the mitral area.[1]

Because of these complications, it is likely that aortic valves will be replaced by homografts or heterografts in the future. However, even these methods await the settling effect of time. It appears that the fresh homografts are currently favored over the freeze-dried or betapropiolactone sterilized valves. The heterograft provokes a much more severe immune reaction and requires a preservative. Formalin is currently favored over betapropiolactone. The heterograft, pig and calf, is always at our disposal while the fresh homograft is limited by time and availability of appropriate size.[13,14,15] Currently we must abide by the sound advice for patience given in the 13th chapter of I Corinthians — "now we see through a glass darkly and then face to face."[16]

Summary

Ball variance is a term used to describe degenerative changes in the silastic ball of the Starr-Edwards prosthetic valve. It is not uncommon. The life and death of a 58-year-old man who survived five years and nine months following placement of an aortic prosthetic valve are described. This patient developed ball variance, multiple cerebral emboli, and a subdural hematoma. The pertinent literature is reviewed.

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Pleuro-Pulmonary Actinomycosis

Report of a Case

FENNELL P. TURNER, M.D.*

Actinomycosis is a relatively rare fungal infection which at one time carried a grave prognosis. The disease is characterized by granulomatous suppuration, fibroblastic proliferation, and the frequent development of multiple fistulae. Multiple minute abscesses are seen and these often contain sulfur granules. In the absence of specific therapy, the disease becomes chronic with eventual spread into adjacent tissues and development of widespread metastatic abscesses.

Actinomyces israelii is a Gram positive, non-acid fast, anaerobic, branching, filamentous organism which shows a tendency to grow in clusters. It is isolated best in Brewer's thioglycolate medium or on blood agar under anaerobic conditions. Although Actinomyces were isolated first from cattle, it is now known that they are also normal inhabitants of mucus membranes of man and that frequently they can be cultured from carious teeth, gums, and tonsillar crypts and from bronchial fluid aspirated at the time of bronchoscopy.

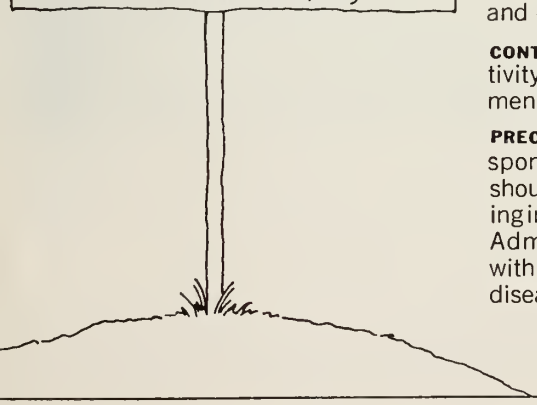
Clinical infections with Actinomyces have been reported throughout the world without relationship to age, sex, race, season of the year, or occupation. Most cases of human infection are believed to follow either inhalation of infected material from the mouth and upper respiratory tract or to follow trauma to the intestinal tract. Frequently they have occurred after a dental extraction, perforated ulcer, ruptured appendix, diverticulitis with abscess, and intraperitoneal abscess containing fish bones. Despite their geographically widespread occurrence, very few cases have been collected in any one series. Thirty-seven cases were seen at the Johns Hopkins Hospital over a period of 25 years.[1] In 20 years at the Veterans Administration Hospital in Minneapolis, 28 cases were observed.[2] From 15 to 35 percent of cases are found to involve the chest wall, lungs, or pleura and at the present time thoracic actinomycosis is seen in about one in every four to six thousand patients admitted to a thoracic surgical service. Because of the rarity of this particular disease, it will be of interest to present this single case report.

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CASE REPORT

L. D., a 51-year-old male, entered the hospital on 4/16/68 because of a two-weeks' illness characterized by malaise, general aching pain, chills, and fever. Approximately 10 days after onset of his illness, the patient also had experienced shortness of breath, tightness of the right side of his chest, and a dry cough. At this time, he was seen by a local physician who found evidence of a pleural effusion. Two thousand cc. of pleural fluid were removed and microscopic examination was reported to have shown a few Gram negative bacilli and a few short coccal chains. Acid-fast bacilli were not detected. A bacterial culture was not reported. Rapid re-accumulation of the pleural fluid necessitated hospitalization. On physical examination, he was a well-developed male of stated age complaining of severe weakness and exhibiting moderate pallor. His temperature was 100 F, pulse 124, and blood pressure 140/60. There was dullness to percussion and suppression of breath sounds at the right base; there were no rales or rhonchi. The remainder of the physical

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SIDE EFFECTS: Hypersensitivity reactions including skin rashes, urticaria, hypotension and thrombocytopenia, have been reported on rare occasions. Drowsiness, lassitude, nausea, giddiness, dryness of the mouth, mydriasis, increased irritability or excitement may be encountered.

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Figs. 1 and 2. Chest roentgenograms taken the day of admission showing a large air-fluid level on the right side posteriorly and a small ai fluid level anteriorly.

examination was essentially negative. Initial laboratory studies showed: hematocrit, 32%; hemoglobin, 10.3 gm/100 cc.; sedimentation rate, 124; white blood cell count, 8,800, 64 percent neutrophiles. Whereas an x-ray of the chest taken prior to admission to the hospital had shown evidence of a pleural effusion without air-fluid level, at the time of admission the chest x-ray showed an air-fluid level on the right side with a second air-fluid level anteriorly (Figs. 1 and 2). Thoracentesis was performed and 900 cc. of thick, slightly greenish fluid were obtained. Microscopic examination and cultures were positive for Actinomyces israelii (Fig. 3). A repeat thoracentesis was carried out and further studies confirmed the presence of Actinomyces israelii. A closed thoracotomy was performed and a chest tube was attached to an underwater seal. Initial antibiotic therapy was started consisting of 600,000 units of Procaine penicillin 4 times a day intramuscularly and Streptomycin in a dosage of 2 Gm. a day. After five days, this therapy was discontinued and the patient was given intravenous penicillin, 5,000,000 units four times a day, and the pleural cavity was irrigated daily with 2,000,000 units of penicillin. This program was continued for nine weeks. During this period, the empyema cavity gradually decreased in size. An ill-defined density, 2.0 x 3.0 cm. in diameter, seen in the right upper lung field, slowly resolved. There was concomitant increase in strength and well-being together with disappearance of anemia. After the empyema cavity had nearly disappeared, Lipiodol® was injected and a bronchopleural fistula was demonstrated (Fig. 4). Penicillin therapy was continued. By 6/22/68, the bronchopleural fistula had closed and the chest tube had been removed. A radiograph of the chest at this time showed no evidence of parenchymal

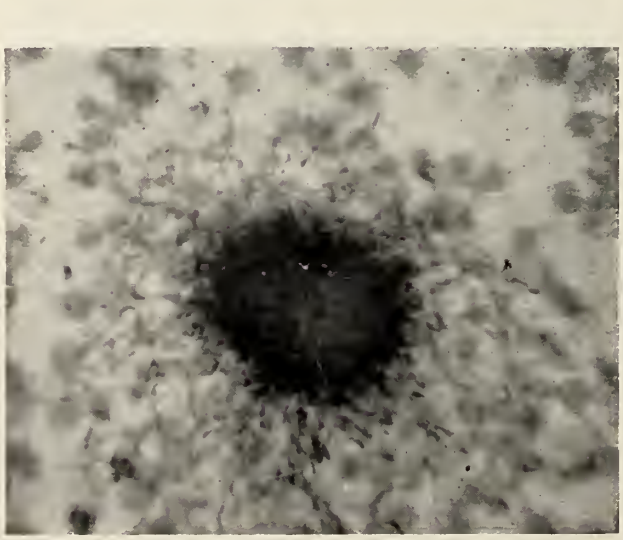


Fig. 3. Photomicrograph of cell block from empyema fluid showing "sulfur granule" composed of a matted mass of branching mycelia. (Methenamine silver nitrate stain courtesy of Kenneth E. Smith, M.D., Chief, Laboratory Service.)

lung disease. Intravenous penicillin was discontinued on 7/9/68 and was replaced with intramuscular Procaine penicillin, 600,000 units four times a day. Procaine penicillin was discontinued on 7/22/68 and the patient was discharged from the hospital. Sub-



Fig. 4. This roentgenogram showing evidence of a bronchopleural fistula was taken at the conclusion of two months of therapy with intravenous penicillin.

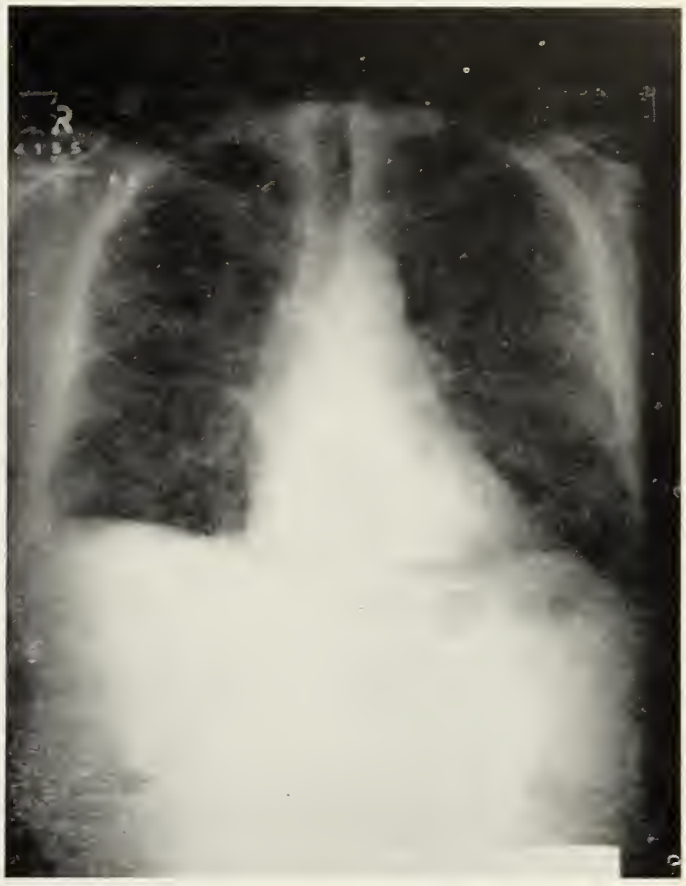


Fig. 5. Chest roentgenogram taken three and one-half months after admission to the hospital showing pleural thickening of right lateral chest wall; the lung is clear.

sequently, a chest roentgenogram was obtained at the time of a follow-up visit to the hospital two weeks following discharge. This x-ray film showed no evidence of intrapleural disease other than a slight evidence of pleural thickening (Fig. 5). Since 8/7/68, follow-up has been conducted by letter and telephone, the last such communication taking place on 3/27/69. As far as can be determined, the patient has remained free of all symptoms, without disability, and for the past eight and one-half months has worked full time. There has been no subsequent cough, sputum, chest pain, chills, or fever. The patient has persistently refused to return to the hospital for further follow-up examination and x-rays of the chest.

Discussion

Before 1940, thoracic actinomycosis was associated with a mortality of from 75 to 100 percent.[3,4] Occasional cures were reported following the use of vaccines, iodine, thymol, or radiotherapy. These modalities of treatment usually were in conjunction with surgery. Following the introduction of the sulfonamides and later of the antibiotics, the results of therapy of this dread disease were improved dramatically. Occasional failure seen in the early days of antibiotic therapy was related undoubtedly to the small doses employed. Although other agents have been shown to be effective, penicillin in large doses and for prolonged periods of time is now the antibiotic of choice. Antibiotic therapy usually has been combined with surgical treatment. In patients with thoracic actinomycosis, this often has meant resection of all or part of a lung together with portions of the chest wall and drainage of empyema cavities. The standard practice now is to give from 10 to 20 million units of penicillin a day by intravenous drip and to continue this therapy for 30 to 45 days followed by surgical excision and then another period of long-term antibiotic therapy until all evidence of disease has been eradicated. In cases where infection has not been associated with fistulous tracts, cures sometimes have been obtained with antibiotic therapy alone.

Conclusion

A case of pleuro-pulmonary empyema due to a pure culture of Actinomyces israelii is reported. It is believed that the empyema was secondary to the breakdown of a small lung abscess as serial chest roentgenograms demonstrated an ill-defined parenchymal lesion 2.0 x 3.0 cm. in diameter which gradually disappeared during the course of treatment. In addition, Lipiodol studies demonstrated a bronchopleural fistula. Clinical cure was obtained by means of closed chest drainage and massive penicillin therapy, both intravenously and intramuscularly, as well as by intrapleural instillation, administered over a total period of 12 weeks.

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The Coronary Care Unit

Data-phone* as a means of providing 24-hour physician coverage

Robert L. Ohler, M.D.†

It is generally believed that intensive coronary care represents a significant advance in the treatment of the patient with acute myocardial infarction. Although statistics which are above criticism are difficult to obtain,[1,2] the majority of those who have observed the results of patient care in an intensive coronary care unit (CCU) believe that a significant reduction in deaths can be expected among those who are hospitalized for myocardial infarcts in a well-functioning coronary care unit. Reported improvement in mortality has been among patients developing serious arrhythmias without significant shock or severe congestive heart failure. The very number of patients stricken by this prevalent disease and the fact that the majority of preventable (arrhythmia) deaths occur in the first 72 hours would make it seem imperative that every community hospital develop the capability of rendering expert intensive coronary care. The large number of such units in operation and programs such as one presently sponsored jointly by the Maine Heart Association and the Maine Regional Medical Program to aid hospitals in setting up such units, indicate an acceptance of this need.

Originally conceived as a unit for constant electrocardiographic monitoring of patients by specially trained nursing personnel in order to permit the immediate detection of cardiac standstill or ventricular fibrillation, the objective of the CCU concept was to permit institution of resuscitative efforts within the all-important 3 to 4 minutes before irreversible brain damage occurred. Largely through the efforts of Lown[3] and others recently the concept of prevention rather than treatment of potentially fatal arrhythmias has been accepted, with the result that in many units emergency resuscitations have become a rarity. This development which requires considerably more sophisticated knowledge on her part is more demanding on the CCU nurse who is, after all, the backbone of the system.[4]

As is well known but deserving of re-emphasis, the fundamental requirements for a coronary care unit are, in order of importance: (a) Intelligent, enthusiastic, well-trained nurses who when engaged in coronary care have no other duties; (b) a team of physicians willing to learn coronary care procedure and to support the nurses; (c) equipment permitting constant monitoring of patients in a suitable location; and (d) a carefully worked out set of policies subscribed to by all permitting nurses to react to the occurrence of important abnormalities of cardiac rhythm when a physician is not immediately available. This involves, by authority of previously written orders, the administration of such potent drugs as lidocaine or isoproterenol in urgent situations while awaiting the physician's arrival. Overwhelmingly, the response of nurses well-trained in CCU techniques and electrocardiogram interpretation has been most gratifying. Working with nurses in this new role has proven to be a most stimulating experience for physicians. However, nurses are not doctors, and it must be emphasized that the availability of a physician on call at all times for support, direction, and the assuming of ultimate responsibility is an absolute essential, practically, morally, and legally.

The necessary ingredients, e.g., trained CCU nurses, interested physicians, monitoring equipment, and workable policies, can, provided the necessary effort is made, become available in any hospital. For the community hospital without a full-time house staff, however, the availability of a physician to make decisions, ECG interpretations in confusing situations, and to provide direction for the nurse is often lacking at the very moment needed.

At the Togus VA hospital, the Data-phone system of remote graphic data transmission[5] over ordinary commercial telephone lines has been in operation for several months making possible the immediate live transmission of electrocardiograms from the coronary care unit to the homes of the four coronary unit physician team members. Experience to date has indicated that a large portion of the difficulty resulting from the impossibility of having a physician familiar with coronary care problems and ECG interpretation in the hospital at all times has been alleviated. Nurses' sense of security, an important factor in the success of the unit, the acceptance of responsibility by the physician, and the resolution of problems of ECG interpretation requiring immediate action have all been enhanced. It is the opinion of those connected with the Togus CCU, as a result of this experience, that the use of this data transmission equipment makes the establish-

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*Detailed information concerning the obtaining of Data-phone equipment in Maine may be obtained from Mr. Robert Graham, New England Tel. & Tel. Co., 45 Forest Avenue, Portland, and assistance in planning may be obtained from Mr. John LaCasse, Director, Telecommunications and Data Processing, Maine's Regional Medical Program, 295 Water Street, Augusta.

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Indication—Oral contraception.

Contraindications—Thrombophlebitis, thromboembolic disorders, cerebral apoplexy or a past history of these conditions, markedly impaired liver function, known or suspected carcinoma of the breast, known or suspected estrogen-dependent neoplasia, undiagnosed abnormal genital bleeding.

Warnings—Watch for the earliest manifestations of thrombotic disorders (thrombophlebitis, cerebrovascular disorders, pulmonary embolism, retinal thrombosis); if present or suspected discontinue the drug immediately.

British studies reported in April 1968[1,2] estimate there is a seven- to tenfold increase in mortality and morbidity due to thromboembolic diseases in women taking oral contraceptives. In these controlled retrospective studies, involving 36 reported deaths and 58 hospitalizations due to "idiopathic" thromboembolism, statistical evaluation indicated that the differences observed between users and non-users were highly significant. The conclusions reached in the studies are summarized in the table below:

Comparison of Mortality and Hospitalization Rates Due to Thromboembolic Disease in Users and Non-Users of Oral Contraceptives in Britain.

Category	Mortality Rates		Hospitalization Rates (Morbidity)
	Age 20-34	Age 35-44	Age 20-44
Users of Oral Contraceptives	1.5/100,000	3.9/100,000	47/100,000
Non-Users	0.2/100,000	0.5/100,000	5/100,000

No comparable studies are yet available in the United States. The British data, especially as they indicate the magnitude of the increased risk to the individual patient, cannot be applied directly to women in other countries in which the incidences of spontaneously occurring thromboembolic disease may differ.

Discontinue medication pending examination if there is sudden partial or complete loss of vision, or sudden onset of proptosis, diplopia or migraine. Withdraw medication if papilledema or retinal vascular lesions are found.

Since the safety of Ovulen in pregnancy has not been demonstrated, it is recommended that pregnancy be ruled out for any patient who has missed two consecutive periods before continuing the contraceptive regimen. If the patient has not adhered to the prescribed schedule the possibility of pregnancy should be considered at the first missed period.

A small fraction of the hormone agents in oral contraceptives has been identified in the milk of mothers receiving these drugs. The long-range effect on the nursing infant cannot be determined at this time.

Precautions—Pretreatment physical examination should include special reference to the breasts and pelvic organs, and a Papanicolaou smear.

Endocrine and possibly liver function tests may be affected by Ovulen. Therefore, it is recommended that such tests if abnormal be repeated after the drug has been withdrawn for two months.

Pre-existing uterine fibromyomas may increase in size under the influence of progestogen-estrogen preparations.

Because these agents may cause some degree of fluid retention, conditions which might be influenced by this factor, such as epilepsy, migraine, asthma, cardiac or renal dysfunction, require careful observation.

In breakthrough bleeding, and all irregular vaginal bleeding, consider nonfunctional causes. Adequate diagnostic measures are indicated in undiagnosed vaginal bleeding.

Carefully observe patients with a history of psychic depression and discontinue the drug if severe depression recurs.

Any possible influence of prolonged Ovulen therapy on pituitary, ovarian, adrenal, hepatic or uterine function awaits further study.

A decrease in glucose tolerance has occurred in a significant percentage of patients on oral contraceptives. The mechanism of this decrease is obscure. For this reason, diabetic patients should be observed carefully while receiving Ovulen.

Because of the effects of estrogens on epiphyseal closure Ovulen should be used judiciously in young patients in whom bone growth is not complete.

The age of the patient constitutes no absolute limiting factor, although Ovulen therapy may mask the onset of the climacteric.

The pathologist should be informed of Ovulen therapy when relevant specimens are submitted.

Adverse Reactions—A statistically significant association has been shown between use of oral contraceptives and the following serious adverse reactions: thrombophlebitis, pulmonary embolism.

Although available evidence is suggestive of an association, such a relationship has been neither confirmed nor refuted for the following serious adverse reactions: cerebrovascular accidents, neuro-ocular lesions, e.g., retinal thrombosis and optic neuritis.

The following adverse reactions are known to occur in patients receiving oral contraceptives: nausea, vomiting, gastrointestinal symptoms (such as abdominal cramps and bloating), breakthrough bleeding, spotting, change in menstrual flow, amenorrhea during and after treatment, edema, chloasma or melasma, breast changes (tenderness, enlargement, secretion), change in weight, changes in cervical erosion and cervical secretions, suppression of lactation when given immediately post partum, cholestatic jaundice, migraine, allergic rash, rise in blood pressure in susceptible individuals, mental depression.

Although the following adverse reactions have been reported in users of oral contraceptives, an association has been neither confirmed nor refuted: anovulation post treatment, premenstrual-like syndrome, changes in libido, changes in appetite, cystitis-like syndrome, headache, nervousness, dizziness, fatigue, backache, hirsutism, loss of scalp hair, erythema multiforme and nodosum, hemorrhagic eruption, itching. The following laboratory results may be altered by oral contraceptives: hepatic function: increased sulfobromophthalein and other tests; coagulation tests: increase in prothrombin, Factors VII, VIII, IX and X; thyroid function: increase in PBI and butanol extractable protein bound iodine, and decrease in T^3 uptake values; metyrapone test; pregnanediol determination.



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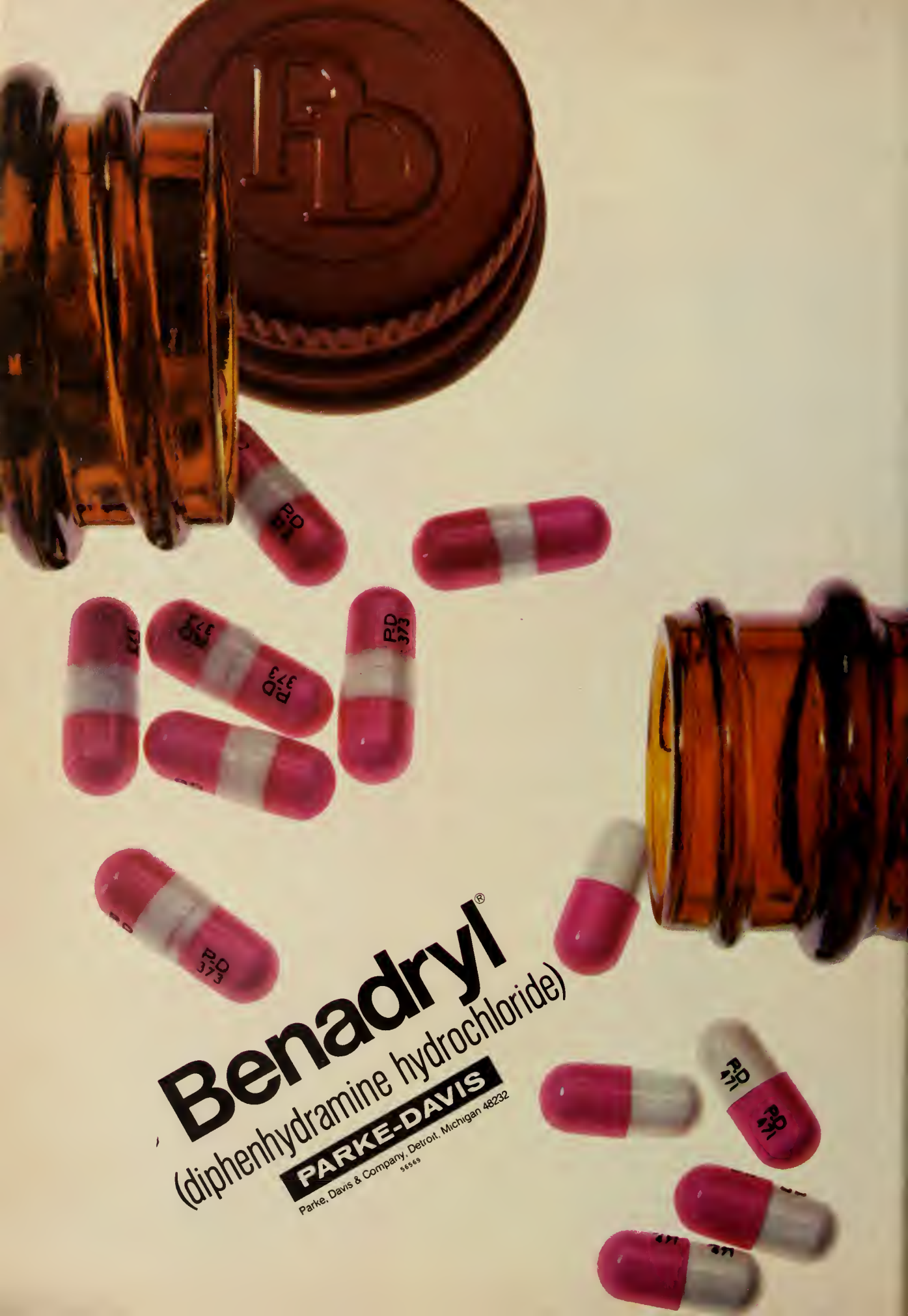

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Fig. 1. Data-phone transmitter (center) and graphic recorder (on top of monitor) in hospital CCU. Transmitter and recorder are similar in appearance to instruments in doctors' homes.

ment of a CCU feasible in any community hospital.

Electronic data transmission by telephone has been available for some time.[6] Transmission of electrocardiograms is not new. Other applications of electrocardiogram transmission, which have been in operation in this state, include a leased open-line Data-phone connection transmitting electrocardiograms from the CCU of the Webber Hospital, Biddeford, to the CCU of the Maine Medical Center,[7] Portland, and a new program centered at the Eastern Maine General Hospital, Bangor, in which electrocardiograms requiring urgent interpretation are transmitted via ordinary commercial lines from outlying communities many miles away. Under the latter arrangement, a cardiologist on stand-by duty renders an interpretation by telephone within a few minutes. The application of the Data-phone service at the Togus VA Center, that of providing instant consultation between the nurse on duty and a CCU physician team member at home, represents, we believe, another extremely useful employment of this equipment.

The equipment, leased at a nominal cost from the telephone companies, functions in principle as follows: The bioelectrical signals are taken from the preamplifier in the hospital monitoring equipment or an ECG machine via a connecting "interface" to the Data-phone transmitter. The input data to the transmitter is used as the modulation to generate a frequency modulated signal. This signal is demodulated at the receiving end to reproduce the original modulation and activates a recording instrument which in this application can be an oscilloscope, standard medical ECG machine, or graphic recorder. Reproduction is extremely accurate. The cost involved (based on data obtained from the N. E. Tel. & Tel. Co. as of April 1969) is $12.00 per month for transmitter (in this instance in the hospital) and $25.00 per month for each receiver (in doctor's home). Installation fees are $25.00 and $50.00 for transmitter and receiver, respectively. Each receiver must be connected to a standard oscilloscope, ECG machine, or graphic recorder. "Interfaces," i.e., connecting wires with necessary adapter plugs, are inexpensive and are obtained from manufacturers of the medical monitoring and recording (ECG) equipment. Thus, for an investment of between $2,500 and $3,000 and a service charge of under $150 monthly, a 4 to 5 doctor hospital coronary care team can provide constant coverage of events of the cardiac cycle while they are occurring by a physician who can make decisions based on actual viewing of these events.

Summary And Conclusions

1. It is believed generally that the intensive coronary care unit (CCU) represents a significant improvement in the care of hospitalized patients with acute myocardial infarctions.
2. The benefit of this improved treatment should be available in every community hospital.
3. The concept of the objective of intensive coronary care has changed from that of resuscitation to that of prevention of potentially fatal arrhythmias. This is more demanding of CCU nurses and implies the need for readily available physician coverage.
4. Requirements for a coronary care unit are: (a) Dedicated well-trained nurses; (b) a team of physicians willing to provide adequate supporting coverage; (c) monitoring equipment in a satisfactory location; and (d) suitable policies, understood and adhered to by all concerned.
5. It is emphasized that nurses function comfortably in this new role of independent action only when supported by physicians who provide direction when needed and clearly assume ultimate responsibility.
6. The electronic data transmission of the electrocardiogram outside of the hospital from the monitor to the physician on call permits adequate physician coverage for the CCU in the community hospital without a full-time house staff. Using Data-phone equipment available from the telephone company, the Togus VA hospital CCU has demonstrated that such coverage is practical.
7. It is the opinion of the author and his associates based on their own experience that adequate intensive coronary care is now feasible in every hospital caring for coronary patients and that the availability of Data-phone transmission of monitored ECG signals can make a significant contribution to this capability.

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Division of Child Health – Objectives and Activities

HELEN C. PROVOST, M.D.* and MARGUERITE C. DUNHAM, M.D.

The purpose of this article is to describe the services available to patients and physicians through the Division of Child Health, formerly the Division of Maternal and Child Health and Crippled Children's Services, of the Maine State Department of Health and Welfare.

The purpose of the Division of Child Health is to strengthen the community by enhancing family life through the provision of services to mothers and children insofar as this can be accomplished through the application of the funds, manpower, authorities and disciplines available to the Division or through other governmental or community resources it may marshall for this purpose.

In order to accomplish this goal, the achievement of certain sub-objectives is necessary. One key sub-objective is the reduction of mortality and morbidity among children. And again, in order to reach this sub-objective it is necessary to ensure that: 1. Women during pregnancy, parturition, and the postpartal period have the best possible such maternal experience; 2. Children have the best possible basis for health and development; 3. Handicapped children have the best possible medical and habilitative or rehabilitative experience.

The Division of Child Health is striving toward the achievement of these objectives and sub-objectives by implementing a variety of services designed to accomplish this. These services are outlined in this article.

For purposes of description, the services available can be considered in two major groups: 1. Public Health services; 2. Individual Health services. This grouping or separation of services is more apparent in the description than in the administration. The activities are presently the component parts of one overall program. It is unrealistic to attempt to separate the health and welfare aspects of a child's life. It is further unrealistic to try to view a child's health or his welfare apart from his family unit. Thus, the work of this Division must be involved with the health and welfare of children and families in order to achieve significant gains in reducing health problems among children in Maine.

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Public Health Services

Public Health Services – Public health activities may be considered as those efforts designed to solve health problems which cannot be solved by the patient and his private physician together. Such activities are aimed at groups of persons or patients as opposed to individual patients served by the private physician. Thus, the public health physician seeks to define those groups of persons who have actual or potential health problems, that is, to delineate groups with health problems or groups with the likelihood of developing problems (high risk groups). He must next determine the causes of the problems and subsequently design effective means of solving the problems of these groups. Those activities which are designed to accomplish these ends for the Division of Child Health are listed below.

Research – Studies designed to define the existence or extent of a given health problem. An example of this is a study presently underway to determine the incidence of erythroblastosis in Maine so that an evaluation can be made of the effectiveness of anti-RH globulin as it is being used in the State. Surveys to determine the effectiveness of plans of treatment of groups with health problems. An example of this, is a study being conducted by the Division to determine the results of treatment of children with parathyroid disease.

Detection – Screening or mass diagnostic programs to detect the extent of a given health problem and to direct early treatment. At the present time, a program exists of visual screening of three-year-old children. The program has had only limited success and is presently being revised in order to make it more effective. The Division is presently planning to add a program of auditory screening of pre-school children and is investigating the possibility of multiphasic screening projects.

Child Health Conferences – Child health conferences have the primary purpose of providing health supervision for children of families unable to obtain this care otherwise. One important result of such conference activities is the detection or case finding of children with handicapping conditions.

Public Information – Through these activities, the Division attempts to make available to the public facts which will increase their ability to anticipate and prevent the development of health problems or detect early the existence of such problems. Such activities may be carried out by utilizing the mass media and by direct contact made by paramedical personnel with the families themselves.

Education – This type of activity is a more intensive and specific informational approach which may be directed to selected public groups or to professional personnel. All feasible means of educational activities may be utilized. One important form is the printed article.

Training – This activity encompasses seminars, workshops, courses and related activities conducted or sponsored for members of a variety of medical and paramedical disciplines. The Division may either actually conduct such sessions or may alternately pay expenses of interested persons who attend such sessions sponsored by other groups. As an example, periodically a physician and a nurse are sent to attend a conference dealing with the care of premature infants. Expenses are paid by the Division of Child Health. The Division is also active in sponsoring selected physicians to attend an annual orthopedic conference held in Maine.

Provision of Resources – Equipment and/or personnel may be provided to assist in improving the capabilities of a community to deal with a health problem. Examples of this may include special equipment purchased for placement in selected hospitals, sub-grants may be awarded to local agencies for development of special projects and loan of personnel.

Establishment of Standards – Standards for care of patients are developed in relationship to personnel and to institutions providing care. Such standards are designed primarily to assure that persons and places providing care are appropriately licensed or certified. The standards apply to physicians, dentists, optometrists, therapists, social workers, nutritionists, nurses, psychologists, hospitals, related patient care institutions, and other venders of services. The Division carries on the function in order to assure itself that the care provided will be appropriate to the needs of the patient.

Individual Health Services

Individual Health Services – This aspect of the program is concerned with providing medical care and assistance with the costs of such care as needed to specific individuals. This is opposed to the groups with which the public health portion of the program is concerned. There are two major areas of this medical assistance portion of the program A – Medical Services and B – Payments.

A – *Medical Services* – Patients eligible for medical services are children who reside in Maine and are under 21 years of age who are suffering from a specified chronic handicapping condition which threatens life or productivity and which requires special and rehabilitative care. They must be unable adequately to obtain such care because of financial need. Eligibility is determined according to a financial guide, unavailability of specialty care or inability to arrange for appropriate care. They also must be properly referred to these services. If a physician is already involved in the care of a child, a referral will not be accepted unless that physician agrees to the referral. For children having no family physician caring for them, referrals will be accepted from other sources.

These services are also available to mothers, either actual or potential, who may be in need of preventive services such as family planning or direct services related to obstetrical care. Such women must reside in Maine and have financial need. Services are offered to these women regardless of age or marital status, but on a limited basis. For those mothers and children eligible for medical services, two kinds of services are available.

Direct medical and paramedical services – Such services are purchased from appropriately qualified private practitioners. Services are purchased from medical specialists almost exclusively since only those children or mothers are eligible who are in need of such specialty care. The Division does not provide comprehensive medical care. This is considered the prerogative of the private or family physician and the Division does not intend to interfere with this relationship. The Division does intend to make available to the family physician a means of obtaining those specialty services for his patient which, because of various obstacles, are not otherwise available to the patient. Since the Division is paying for these services, it reserves the right to select the persons and places from which it purchases the services. The selection of personnel and institutions is based on the needs of the patient. Medical and paramedical specialists are selected on the following basis, after legal practice requirements have been satisfied.

Personnel – When board certified specialists are available and willing to work with the Division, these persons are selected. When these specialists are not available, board eligible specialists are selected. When board eligible specialists are not available, physicians are selected who have special training or experience.

Hospitals and institutions are selected according to the following criteria. Hospitals and institutions must be properly licensed by the responsible state agency. When hospitals are available which provide *all* the specialty services needed by a patient, these hospitals are used. *All* services include 24-hour resident medical coverage, pediatric department headed by a pediatric specialist, a pathology department headed by a pathologist, a radiology department headed by a radiologist, an anesthesiologist for those children who require surgery and staff specialists appropriate to the needs of the patients such as a cardiologist for children with a cardiac problem, an otolaryngologist for a child with an ear, nose or throat problem, a neurologist, an orthopedist, etc. Hospitals not meeting these requirements can be utilized by the Division under unusual and emergency circumstances.

An additional requirement for purchase by the Division, of medical and hospital services, is the requirement that services be purchased in Maine unless the necessary service is not available anywhere in the State. The determination of availability is made by the Division and is based upon the advice of selected practicing specialists in Maine appropriate to the needs of the patient. If a child is referred out-of-state by his family physician for a service which is, in the opinion of a Maine specialist, available in Maine, then the child must be denied the assistance of the Division even if he is otherwise eligible until such time as his medical care is returned to Maine's specialists. This requirement is a controversial one but is considered as justified on the following basis. 1. A significant portion of the funds being utilized by this division originate from Maine taxes and should be used in Maine as long as this does not unduly jeopardize the health of the patient; 2. Division funds are extremely limited and the cost of hospitalization is significantly higher outside of Maine; 3. If the development of specialty medical care in Maine is to be promoted then those services available must be utilized to the fullest extent appropriate.

Indirect or enabling services – These services are designed to assist patients in availing themselves of needed medical services, and consist of provision of 1. Arrangements to obtain the care for those persons who may be unable to determine specialists appropriate to their needs or the method of actual procurement of the care; 2. Transportation to keep appointments; 3. Communications related to obtaining care.

B – *Payments for Medical Care* – Payments are made direct to vendors exclusively. Payments are made only for those services for which arrangements are specifically made through the Division. Payments are made (a) for physicians office visits, according to usual and customary fees; (b) for physician inpatient-hospital visits, according to Blue Shield Plan A fee schedule (if and when funds permit, this area of payments will be made according to the usual and customary fees); (c) for dentists, according to the Maine State Dental Association fee schedule; (d) for orthodontists, according to the Maine State Orthodontic Society fee schedule; (e) for hospitals, according to reasonable costs computed by formula; (f) for paramedical services, according to usual and customary fees.

It should be emphasized at this point that the agency normally does not provide care of an emergency nature, and therefore services need to be authorized in advance of the service. Furthermore, the Division has no financial responsibility for provision of care until such time as it has assumed the responsibility by authorizing that care.

In the past, the emphasis in this agency has been on the medical assistance aspects of the program, that is, providing care for those persons referred to the Services with only limited efforts at case finding and prevention. At the present time, this emphasis is shifting so that more activities are directed toward early case finding and identification of persons at risk of disability. In the future, plans will call for a greater portion of the activities to take place in the area of identification of groups of high risk persons and prevention of the development of handicapping conditions in such population groups. The Division's direct work with disabled children and families will be provided in the future to a much greater degree by private agencies of medical care through contractual agreement, with this agency retaining functions which relate to standard setting and standard maintenance, consultation, research, planning and evaluation. Thus, with such a trend toward decreasing activities in direct patient management and an increasing emphasis in true public health activities, the agency will be better able to serve the needs of both practicing physicians and the children and the families in Maine.



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Across The Desk

Medical Liability

MEDICAL LIABILITY has become serious occupational hazard in practice of medicine. Estimates are $35 million eventually will be paid for 1968 claims. Malpractice insurance rates have gone up 3 times faster than cost of living since World War II. Some MDs find it difficult to obtain insurance. Those in specialties such as surgery, anesthesiology fear liability insurance may at any time become unavailable to them. Despite increased premiums and fact several companies write insurance on selective basis, industry has reported yearly underwriting losses on this business since '59. AMA Board of Trustees report to be considered by House of Delegates next month outlines problems, suggests some steps to help protect both physicians and public.

AMA's Law Division last week met with major malpractice insurance carrier to review its claim experience over past 5 years. Review indicated problem has by no means peaked. Many cases of clear malpractice do occur. Medical staffs sometimes shirk responsibility by not disciplining own members. Some perform procedures for which they are not qualified. Consultants are not called when consultation clearly indicated. Review showed most claims are avoidable. Part of problem can be traced to MD shortage – physicians working long hours, trying to do too much.

What can be done? MD who blames plaintiff lawyers exclusively for rise in malpractice claims should give consideration to stiffer regulations for competence among his own staff. Other precautionary measures: Common-sense safety programs with respect to equipment; watchdog committees that will not hesitate to remove or limit hospital privileges for careless or incompetent practitioners; closer scrutiny over paramedicals who assist MD. Attorney specializing in defending medical liability cases recommends that MD keep up with medical advances; don't guarantee a cure; avoid unnecessary experimental procedures; keep good records; do not hesitate about consultation; "be as careful with your tongue as you are with your scalpel." – *AMA Newsletter,* Vol. 1, No. 6, June 16, 1969

Direct Loans Favored For Public Hospitals

Public hospitals got a break recently during hearings on Hill-Burton legislation by the Senate Labor Committee's Health Subcommittee. Pressed by Chairman Ralph Yarborough (D-Tex.) and several other members, HEW Under Secretary Veneman acknowledged that the department would go along with the idea of a direct loan program for public hospitals. HEW has been opposing the idea of any new loan program for public hospitals. The feeling was that the budget was too tight for a direct loan effort, and the Bureau of the Budget long has opposed loan guarantees for public institutions which are financed by tax-exempt bonds.

American Hospital Association declined to take a pro-or-con stand on a provision in Yarborough's bill (S. 2182) for direct loans to public institutions. AHA trustee Martin Steinberg, of New York's Mount Sinai Medical Center, said only that AHA believes a similar

Continued on Page 169

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Clues to PVD The geriatric smoker

In studies on peripheral vascular disease—a common by-product of the degenerative aging process—considerable attention has focused on the important role of smoking in the progression of the disease. Although it may not be etiologic, smoking is widely recognized as a prominent contributing factor.[1]

Skin blood flow—significant factor in PVD. Cutaneous digital vasoconstriction caused by nicotine has been observed both in normal subjects and in patients with peripheral vascular disorders.[1,2] Among patients with peripheral vascular disease, however, age and the severity of the disease appear to modify the effects of nicotine. For example, in a study of older patients with *marked* peripheral vascular disease,[3] changes induced by smoking were not statistically significant for the group as a whole. This was explained on the basis of decreased skin reactivity. *Smoking is not permissible in any stage of the disease,* since even "... minimal reduction in blood flow in patients with ischemic limbs may produce a further reduction in tissue nutrition, and thus may be another case of the proverbial straw on the camel's back."[3]

In another study of patients with peripheral vascular disease,[4] the investigators stress that decreased skin blood flow during smoking "... is the factor of most importance to the patient with peripheral vascular disease." *While such patients may adjust to the discomfort of vascular insufficiency in skeletal muscle, decreased skin blood flow may often lead to severe symptomatology.*

More and more physicians have adopted the practice of investigating for peripheral vascular disorder when confronted with a geriatric patient who is a habitual smoker. Once a diagnosis is established, therapeutic measures are directed toward increasing the peripheral circulation and appropriate management of the patient's general medical needs. These include the important safeguards of keeping warm and refraining from smoking.

Professional model posed for illustration.

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Indications: Conditions associated with deficient circulation; *e.g.*, peripheral vascular disease, vascular spasm, varicose ulcers, decubital ulcers, chilblains, Meniere's syndrome and vertigo.
Caution: Roche Laboratories endorses caution in the administration of any therapeutic agent to pregnant patients.
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Dosage: 1 or 2 Timespan Tablets morning and night.
How Supplied: Timespan Tablets—150 mg nicotinyl alcohol in the form of the tartrate salt, bottles of 50.

References: (1) Roth, G. M.; Shick, R. M., and Secrest, R. R., in James, G., and Rosenthal, T., eds.: *Tobacco and Health*, Springfield, Ill., Charles C Thomas, 1962, pp. 311-322. (2) Entmacher, P. S.: Proc. Med. Sect. Amer. Life Convention *51*:149, 1963. (3) Freund, J., and Ward, C.: Ann. New York Acad. Sci. 90:85, 1960. (4) Coffman, J. D., and Javett, S. L.: Circulation 28:932, 1963.

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"All Registered Nurses are Alike"

It stands to reason. They all go through the same training; they all have to pass the same tests: they all have to measure up to the same standards. Therefore, all registered nurses are alike.

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You might also say that all registered nurses aren't alike, either.



program should be provided for private, nonprofit institutions as well. He said the provision favors public hospitals.

Both HEW and AHA asked that emphasis on per capita income in the Hill-Burton formula, the so-called "squaring" factor, be abolished. But Yarborough defended the formula in his questioning of witnesses. Texas comes out somewhat better under the squaring formula, which has been approved by the House. Another witness, former PHS Surgeon General Eugene Guthrie, asked that state Hill-Burton agencies be required to work with the state's Areawide Comprehensive Health Planning Agencies. Guthrie heads the new American Academy of Comprehensive Health Planning. – *Washington Report on Medicine & Health,* No. 1147, June 23, 1969

Medicaid Advisory Group Recommends Fee Increases Tied To Price Index

The group organized by Dr. James Haughton to look for means of cutting Medicaid professional fee costs has come up with a tentative recommendation of a fee freeze. It's aimed at saving money without curtailing quality of care. The draft proposal has been sent to the 10 members of Haughton's group to make sure that the wording is an accurate reflection of the agreed-upon finding.

Basically, the group wants to hold Medicaid fees at the level they occupied last Jan. 1. Fees would then be frozen until next June 30. After that time, *increases could be no greater than the monthly increments in the Labor Department's Consumer Price Index* for all consumer goods and services – except medical care. In the meantime, the group recommends that HEW try to devise a more accurate assessment of current average health professional fees. There is general agreement that the CPI leaves much to be desired as far as accuracy is concerned.

Haughton's group felt that a more drastic rollback of Medicaid fees would have the effect of causing ghetto practitioners either to see more patients, thus compromising quality of care, or to get out of the ghetto altogether.

Meanwhile, *AMA has gone to Under Secretary Veneman with its own proposal* for curtailing Medicaid abuses. The AMA "plan" is a reaffirmation of the Association's historic view that fee limits are inadvisable. AMA wants HEW to let physicians step up their own efforts at policing themselves through peer review of utilization. AMA is expected to battle the Haughton proposal to the wire, not only because of the Association's opposition to fee limits but because AMA feels the Haughton group (see May 26 issue) is too liberal. At the meeting with Veneman, AMA was not advised of the tentative Haughton recommendations. There isn't a lot of time. HEW plans to present the draft recommendation to representatives of interested groups at a June 30 meeting, then publish the regulations in the "Federal Register" the following day. – *Washington Report on Medicine & Health,* No. 1147, June 23, 1969

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Maine Heart Association Notes

20 Winter Street, Augusta, Maine

Effect of Reserpine in Raynaud's Phenomenon

Several investigators reported good results from the use of reserpine in the treatment of patients with Raynaud's phenomenon. Because of its serotonin-depleting effect, reserpine has been thought to have a beneficial effect, particularly in patients with scleroderma. . . .

The present study was undertaken for two reasons: The available reports of the results of treatment of Raynaud's phenomenon with reserpine covered only the first few weeks of therapy, or the duration of the follow-up was not given. . . . Secondly, physiological studies were undertaken in patients with Raynaud's phenomenon treated with reserpine to identify the mechanism by which this drug exerts its beneficial effect.

Definitive conclusions concerning the efficacy of any form of therapy in a disorder, such as Raynaud's phenomenon, . . . must be based on long-term, well-controlled, and preferably double-blind studies. We consider the good results obtained in the present investigation as sufficiently encouraging to warrant initiation of such a study. . . . the return of the vasoconstrictor response to tyramine and of the clinical deterioration in two of our patients while on reserpine therapy is not clear. It is uncertain whether or not this may be a serious limiting factor in the treatment. . . . . . we conclude . . . that there is no evidence supporting the existence of a defect in catecholamine metabolism in Raynaud's phenomenon that leads to increased release of catecholamines from the tissues of the hand.

Our results suggest that the beneficial effect of reserpine . . . is related to its catecholamine-depleting effect and the consequent diminution of adrenergic vasoconstriction. . . . our results . . . show that blockade of neurogenic vasoconstriction is of benefit in these patients. They, therefore, suggest that an element of neurogenic vasoconstriction might be of importance in the pathogenesis of Raynaud's phenomenon and of its consequences. Reserpine therapy, by diminishing neurogenic vasoconstriction, decreases the frequency, severity, and duration of vasospastic attacks which are in turn less likely to result in permanent damage to the tissues.

Submitted by Jacob B. Dana, M.D., President, Maine Heart Association.

Reference: Kontos, H. A., and Wasserman, A. J., Circulation, Vol. 39, Pages 259-266, 1969.

AMERICAN CANCER SOCIETY - MAINE DIVISION, INC.

Brunswick, Maine

Research on Why A Normal Cell Changes to A Cancer Cell Narrowed

NEW YORK — The search for an understanding of how, and why a normal cell changes to a cancer cell has been narrowed as a result of research findings by a New York University investigator.

Scientists have long presumed that excessive amounts of radiation altered normal cells to the point of malignancy — losing their normal growth control systems — but work by Dr. Melvin H. Amler, Research Associate Professor of Pathology at the NYU Dental College, assisted by Dr. Harry L. Robinson, Department Chairman, is believed to be the first to pinpoint the mechanism of change by radiation of a specific normal cell to a classical, specific type of cancer cell. According to Dr. Amler, other known cancer causing agents could have the same mechanism in causing different types of cancer. His findings were announced by the American Cancer Society, which provided support for his research. They are reported in VOL. 26, NOS. 1 and 2, issue of the EXPERIMENTAL MEDICINE AND SURGERY JOURNAL.

Dr. Amler's work illustrates the drama and excitement of basic research. Quite by accident — during a series of experiments to find ways of stimulating bone marrow development, and enhancing the acceptability of marrow transplants — Dr. Amler witnessed the transformation of a normal, specific bone marrow cell, a megakaryocyte, into a Reed-Sternberg cell, which is conclusive diagnostic evidence of Hodgkin's disease.

His line of research shifted quickly to the new line. He repeated this development many, many times, using the most foolproof testing systems to validate research findings.

He made his startling observation while doing an experiment with rats to overcome problems of rejection in bone marrow graft. Bone regeneration is very important in dentistry, and Dr. Amler had developed a means of pre-conditioning the graft donor so that when the graft was finally made, it would "take," and be accepted by the recipient.

His system appeared simple and logical. Using the rat as his experimental animal, Dr. Amler first created the need for a bone marrow graft by experimentally inducing aplastic anemia — destruction of the blood forming capabilities of the bone marrow — deep X-Irradiation. Grafting, or transplanting of large amounts of normal bone marrow is the standard form of treatment for aplastic anemia, but frequently the host, or recipient of the graft, will reject it because it is foreign.

Dr. Amler developed a system wherein he prepared the donor by implanting a neutral substance — a polyvinyl plastic sponge — into the femur of a normal rat and let it remain there for two weeks. During this time, marrow tissue would grow into the sponge, but blood forming functions of that marrow would not get beyond the "pre-bone," or embryonic stage. At the end of two weeks, he transplanted the sponge into the bone of a sick, anemic rat. At this point, the blood forming function would continue to develop. As this function had not yet become differentiated, that is, identified itself immunologically with its host rat, it adapted to the new host and continued to maturity. The graft was successful, and the problem of marrow graft rejection solved — at least, for Dr. Amler's test animals.

In preparation for his transplant experiments, Dr. Amler did a time study on the effects of irradiation on the rats to establish baselines of levels of aplastic anemia developed under controlled conditions. At the level of 900 rads he noticed that the nuclei of megakaryocytes changed. They became basophilic — they now took a dark stain for microscopic study. The nuclei had changed, at that level of radiation, from a neutral substance to an acid substance. Examining it closer, he determined that the changed cell, was, in fact, now a Reed-Sternberg cell . . . the type, which when found in a sick patient, is conclusive evidence of Hodgkin's disease.

Scientists have thought that the classical Reed-Sternberg cell was an altered megakaryocyte, but few had considered the probability that the transformation was caused by, or that it could be caused by irradiation. No one, according to Dr. Amler, had studied why the megakaryocyte nucleus changed color, becoming dark.

Although Dr. Amler states flatly that the particular effect of 900 rads on rats cannot be extrapolated to humans, he reports that cells from biopsies of human Hodgkin's disease tumors appear to be pathologically the same as those cells transformed by irradiation in the rat. Also, the nucleal reactions — changes occurring in the nucleus of rat megakaryocytes have been identified as the same as the nucleal reactions of Reed-Sternberg cells in human tissue.

American Cancer Society News Service Release

County Society Notes

WASHINGTON

A regular meeting of the Washington County Medical Society was held on April 28, 1969 at the Dennys River Inn, Dennysville, Maine. There were eleven members and guests present.

The first item of business was the potential closing of the TB Sanatorium in Fairfield, Maine. There was considerable discussion on this with the members generally feeling that it would be undesirable to have the facility closed. The Society voted to have the secretary write a letter to Dean Fisher, M.D. of the State Department of Health, opposing the closing of the sanatorium, unless satisfactory arrangements could be made to take the place of the sanatorium. It was generally felt that the TB Sanatorium offered better facilities for treatment and control of tubercular patients than the present general hospitals.

Rowland B. French, M.D. of Eastport, Maine discussed the opening of Tuberculosis Clinics in Washington County. He also went on to speak about his recent course in tuberculosis control and the modern methods for diagnosis and treatment.

Donald M. Robertson, M.D., delegate to the Maine Medical Association House of Delegates, went over in some detail the Interim Meeting of the House of Delegates, held on April 13, 1969 at Brunswick, Maine.

Eliot T. Stadler, M.D. of West Gouldsboro, Maine reported on a forthcoming study of factors relevant to patient utilization of medical care. This will survey a sample of the patient population from Sullivan to Jonesport. This study will utilize University of Maine students on a grant from the Regional Medical Program. The questionnaire is approximately a fifty-page questionnaire that will take three to four hours to fill out.

George B. Shaw, M.D. of Machias, Maine discussed the Medi-card plan, which would be a credit card system for the doctor to be paid by the organizers of the credit card system, withholding 6%. The secretary was asked to write to the organizers of Medi-card for more detailed information about the plan, also to invite one of their speakers to explain the system to the Society.

Dr. Shaw also discussed the Blue Cross-Blue Shield Plan and felt that they had many shortcomings, as far as the physicians were concerned, but stated that at present they were the best that was offered locally. He feels that some of the low rate contracts of Blue Cross-Blue Shield were very inadequate.

KARL V. LARSON, M.D., *Secretary*

HANCOCK

Thirteen members and six guests were present at the meeting of the Hancock County Medical Society which was held on May 14, 1969.

The guest speaker, Stanley J. Evans, M.D. of Bangor, spoke on Acute Care in a State Mental Hospital. This informative talk on the new developments at the Bangor State Hospital was followed by a discussion and commentary revealing a keen interest by the audience in the challenging project being carried out by Dr. Evans.

A report was given by Eliot T. Stadler, M.D., delegate to the Maine Medical Association, on the Interim Meeting of the M.M.A. House of Delegates which was held in Brunswick, April 13, 1969.

A proposed Comprehensive Health Care Committee for the Hancock Medical Society to collect and correlate information for the Society in this fast developing field of organization of medical care was adopted at the meeting.

Morris A. Lambdin, M.D. reported on the intended visit of Dr. Tompkins from the Childrens' Bureau in Washington to review the Maternal and Infant Care project locally in June. Dr. Lambdin also reported the funding of a $25,000.00 grant for planning a hospital for handicapped children in Hancock County.

A resolution proposed by Dr. Stadler was approved for presentation at the June meeting of the House of Delegates of the Maine Medical Association that the Committee on Legislation shall review the processes by which the Association's purposes are brought to the attention of the Legislature and the public.

BRADLEY E. BROWNLOW, M.D., *Secretary*

LINCOLN-SAGADAHOC

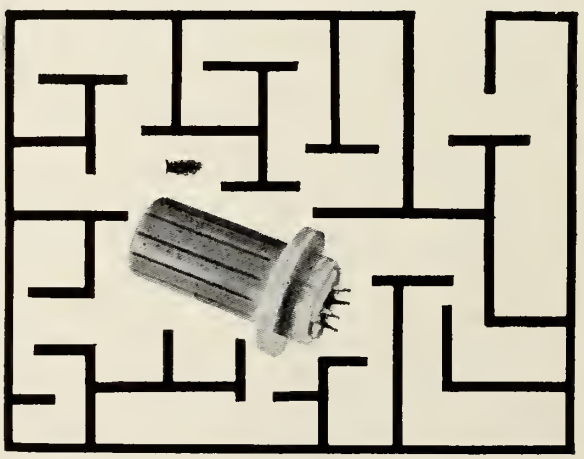
A meeting of the Lincoln-Sagadahoc County Medical Society was held at The Ledges in Wiscasset, Maine on May 20, 1969. The meeting was called to order by the President, Paul A. Fichtner, M.D.

The results of the Maine Medical Association's poll on L.D. 783 were read.

A letter from Alan W. Zeller, M.D. requesting transfer from active to inactive membership was read. The motion was made and seconded, and approved unanimously. Dr. Zeller has been named a participant in the CARE-Medico program at the Avicenna Hospital in Kabul, Afghanistan.

James O. Smith, M.D. introduced Carl A. Brinkman, M.D. of Gorham who spoke on four aspects of neurosurgery: severe head injury, cryoresection of the pituitary, anterior fixation of cervical spine, retrograde carotid arteriography.

GEORGE W. BOSTWICK, M.D., *Secretary*



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Warnings: Use only after critical appraisal in patients with liver damage, renal damage, urinary obstruction or blood dyscrasias. If toxic or hypersensitivity reactions or blood dyscrasias occur, discontinue therapy. In closely intermittent or prolonged therapy, blood counts and liver and kidney function tests should be performed.

Precautions: Observe usual sulfonamide therapy precautions including maintenance of an adequate fluid intake. Use with caution in patients with histories of allergies and/or asthma. Patients with impaired renal function should be followed closely since renal impairment may cause excessive drug accumulation. Occasional failures may occur due to resistant microorganisms. Not effective in virus and rickettsial infections.

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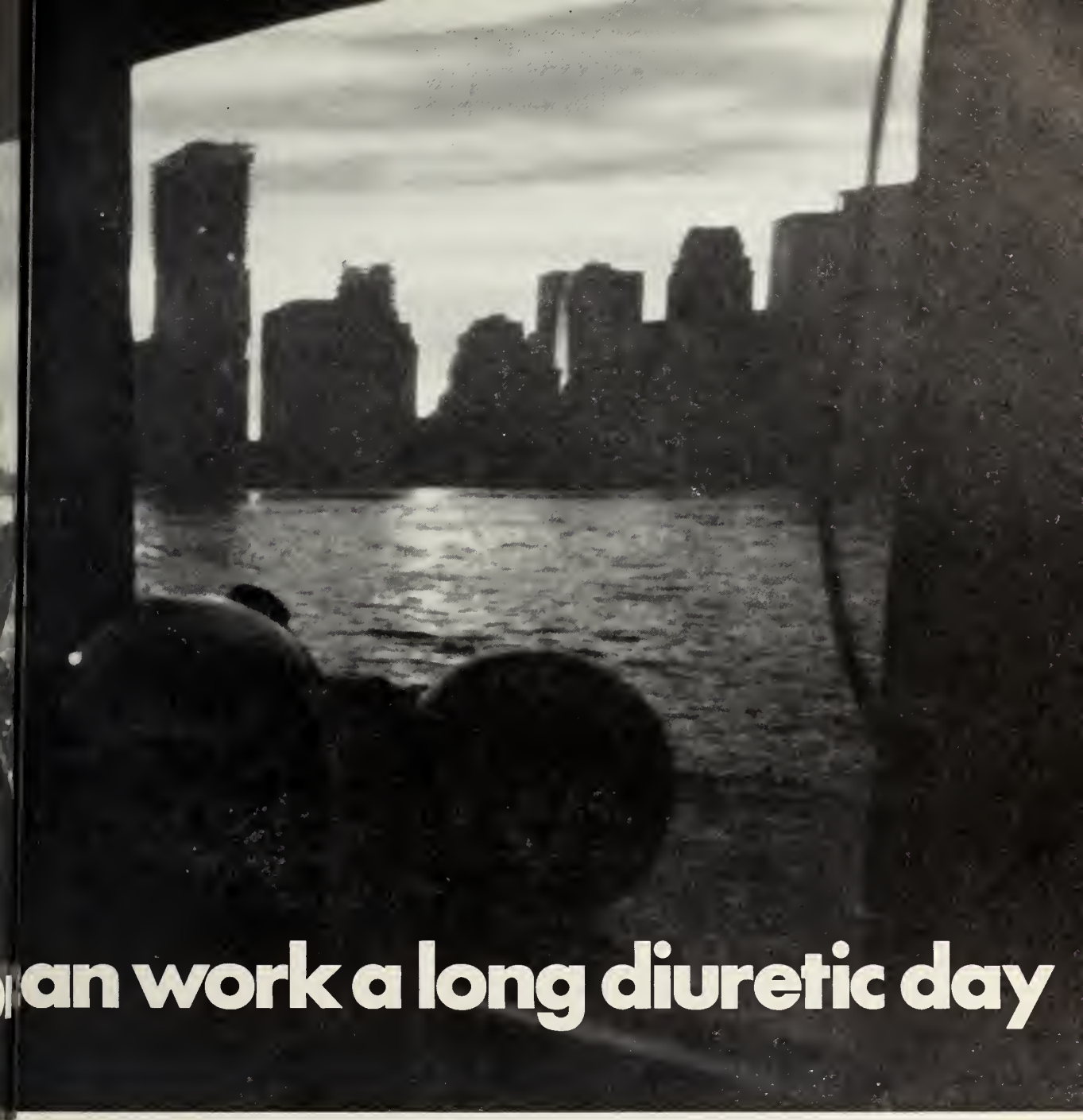
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Use with caution in pregnant women and nursing mothers since the drug may cross the placental barrier and appear in cord blood and since thiazides may appear in breast milk. The drug may result in fetal or neonatal jaundice, thrombocytopenia, and possibly other adverse reactions which have occurred in the adult. When used in women of childbearing age, balance benefits of drug against possible hazards to fetus.

Precautions: Antihypertensive therapy with this drug should always be initiated cautiously in postsympathectomy patients and in patients receiving ganglionic blocking agents, other potent antihypertensive drugs or curare. Reduce dosage of concomitant antihypertensive agents by at least one-half. Because of the possibility of progression of renal damage, periodic determination of the BUN is indicated. Discontinue if the BUN rises or liver dysfunction is aggravated. Hepatic coma may be precipitated.

Electrolyte imbalance, sodium and/or potassium depletion may occur. If potassium depletion should occur during therapy, the drug should be discontinued and potassium supplements given, provided the patient does not have marked oliguria.

Take special care in cirrhosis or severe ischemic heart disease and in patients receiving corticosteroids, ACTH, or digitalis. Salt restriction is not recommended.

Adverse Reactions: Nausea, gastric irritation, vomiting, anorexia, constipation and cramping, dizziness, weakness, restlessness, hyperglycemia, glycosuria, hyperuricemia, headache, muscle cramps, orthostatic hypotension, which may be potentiated when chlorthalidone is combined with barbiturates, narcotics or alcohol, aplastic anemia, leukopenia, thrombocytopenia, agranulocytosis, impotence, dysuria, transient myopia, skin rashes, urticaria, purpura, necrotizing angiitis, acute gout, and pancreatitis when epigastric pain or unexplained G.I. symptoms develop after prolonged administration. Other reactions reported with this class of compounds include: jaundice, xanthopsia, paresthesia, and photosensitization.

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The burdened heart, psychic tension, and adjunctive therapy with Valium® (diazepam):



Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms have occurred following abrupt discontinuance. Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation, have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

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Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110



Artist's conception schematically showing varying ischemic ventricular muscle tissue.

To help lift psychic tension from the already burdened heart

When the cardiac patient shows signs of panic-like reactions following initial diagnosis—a daily regimen of 10-mg Valium (diazepam) tablets *t.i.d.* or *q.i.d.* can help control *severe* psychic tension, anxiety, apprehension and agitation. For *less severe* emotional stress, the 5-mg tablet usually provides the desired calming effect.

When the cardiac patient's outlook impedes convalescence—Valium, as it relieves psychic tension, can help the patient regain a realistic perspective... help him deal more rationally with convalescence by countering excessively anxious attitudes towards the future.

When the cardiac patient can't adjust emotionally to post-recovery limitations—Valium, through its prompt and pronounced calming action on psychic tension, may help avoid exacerbation or aggravation of cardiac symptoms.

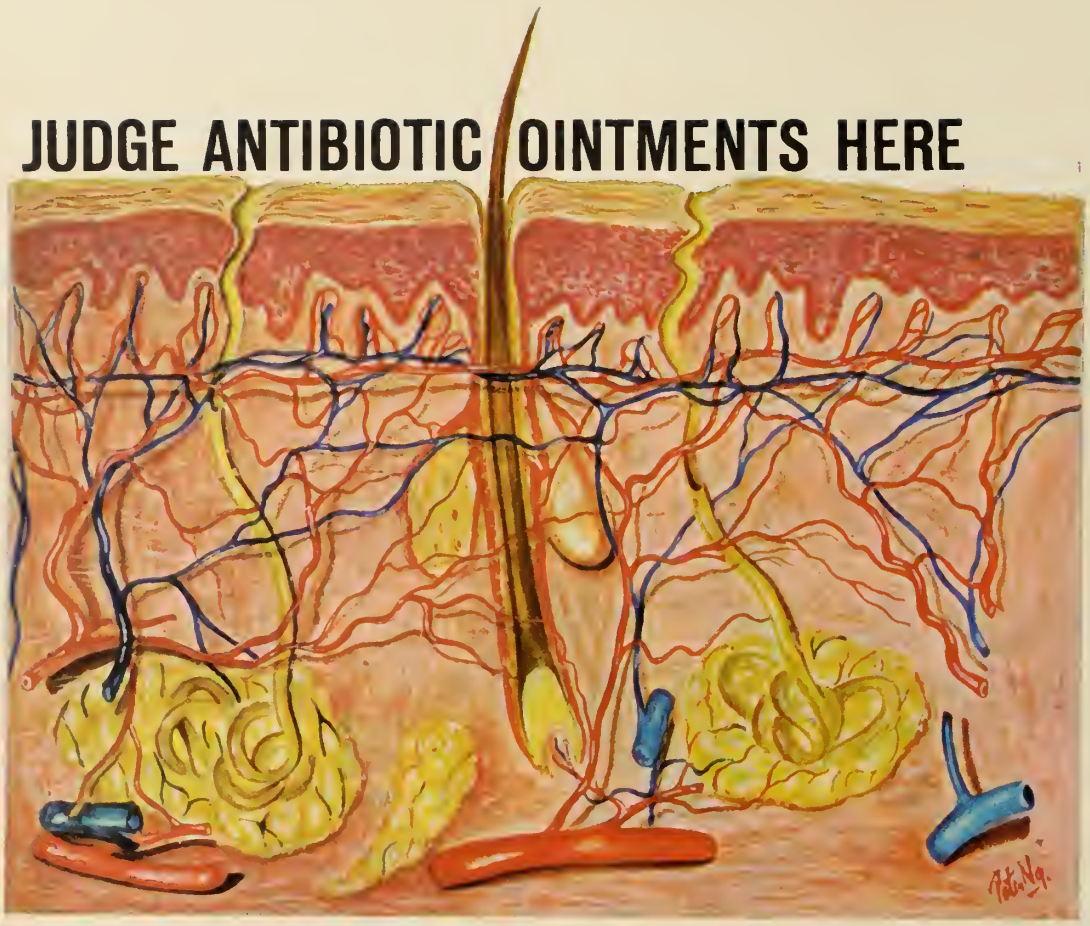
On proper maintenance dosage, Valium seldom dulls the senses or interferes with functioning.

Should anxiety-induced insomnia be a problem—an *h.s.* dose added to the *t.i.d.* schedule usually helps permit a night of restful sleep.

Valium®
(diazepam)

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Caution: As with other antibiotic preparations, prolonged use may result in overgrowth of nonsusceptible organisms and/or fungi. Appropriate measures should be taken if this occurs. Articles in the current medical literature indicate an increase in the prevalence of persons allergic to neomycin. The possibility of such a reaction should be borne in mind.

Contraindications: This product is contraindicated in those individuals who have shown hypersensitivity to any of its components.

Supplied: Tubes of 1 oz., ½ oz. with applicator tip, and ⅛ oz. with ophthalmic tip.

Complete literature available on request from Professional Services Dept. PML.

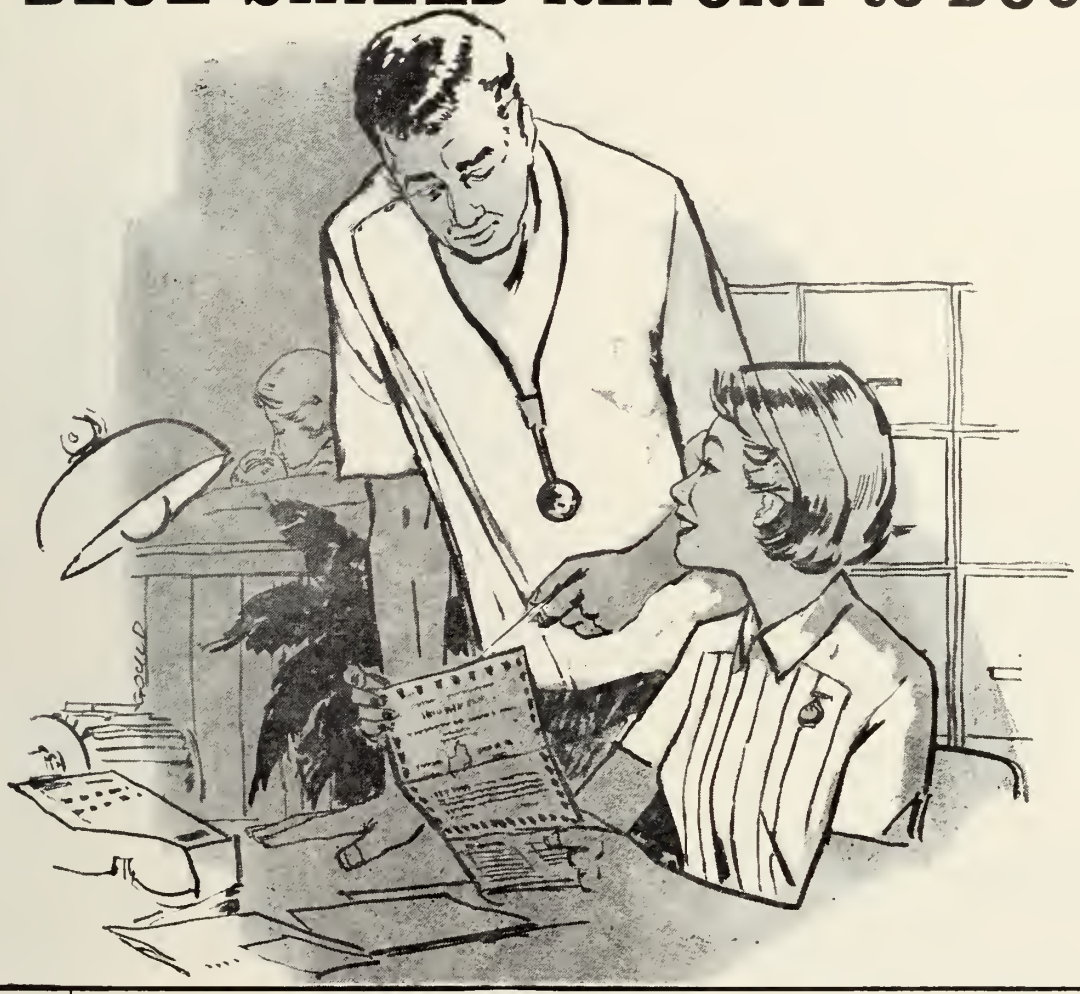
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A BLUE SHIELD REPORT to DOCTORS



REPORT # 26

Blue Shield Physicians' Ties Strengthened

The AMA House of Delegates has urged medical society officers and executives to participate in the activities of their Blue Shield Plans.

In a resolution adopted at the AMA Clinical Convention in Houston, the House cited a need for improving relationships between Plans and medical societies in some areas, and resolved:

"That medical society officers and medical society executives be urged to participate in the activities of their respectively sponsored or approved Plans to the end that all such Plans shall, in fact, be and continue to serve as economic arms of the medical profession in offering sound alternatives to the public in the voluntary financing of health care."

In other action, the House commended the AMA board of trustees for bringing the association's health care coverage under Blue Shield and Blue Cross. Blue Shield was cited as "one of medicine's closest partners, standing with the association over the years for advancement of free enterprise in medical practice in America."

The resolution said the "Blue Shield and Blue Cross have constantly improved their own flexibility to provide quality care in a manner satisfactory to both employers and providers of service."

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In the complex picture of moderate to severe anxiety...



there is a new reason for prescribing Mellaril (Thioridazine HCl)

effectiveness in mixed anxiety-depression

Long recognized for its usefulness in the treatment of moderate to severe anxiety, Mellaril is now also known to be effective against mixed anxiety-depression.

Often the symptoms of anxiety states are difficult to sort out—even with the most careful probing. The patient may manifest symptoms of agitation, restlessness, insomnia, somatic complaints. But what of the depression that may be mixed in the total picture? It is reassuring to know that Mellaril may be prescribed—with strong possibilities of success—when there is anxiety alone or a mixture of anxiety and depression.

Before prescribing or administering, see Sandoz literature for full product information, including adverse reactions reported with phenothiazines. The following is a brief precautionary statement.

Contraindications: Severe central nervous system depression, comatose states from any cause, hypertensive or hypotensive heart disease of extreme degree.

Warnings: Administer cautiously to patients who have previously exhibited a hypersensitivity reaction (e.g., blood dyscrasias, jaundice) to phenothiazines. Phenothiazines are capable of potentiating central nervous system depressants (e.g., anesthetics, opiates, alcohol, etc.) as well as atropine and phosphorus insecticides. During pregnancy, administer only when necessary.

Precautions: There have been infrequent reports of leukopenia and/or agranulocytosis and convulsive seizures. In epileptic patients, anticonvulsant medication should also be maintained. Pigmentary retinopathy may be avoided by remaining within the recommended limits of dosage. Administer cautiously to patients participating in activities requiring complete mental alertness (e.g., driving). Orthostatic hypotension is more common in females than in males. Do not use epinephrine in treating drug-induced hypotension. Daily doses in excess of 300 mg. should be used only in severe neuropsychiatric conditions.

Adverse Reactions: *Central Nervous System*—Drowsiness, especially with large doses, early in treatment; infrequently, pseudoparkinsonism and other extrapyramidal symptoms; nocturnal confusion, hyperactivity, lethargy, psychotic reactions, restlessness, and headache. *Autonomic Nervous System*—Dryness of mouth, blurred vision, constipation, nausea, vomiting, diarrhea, nasal stuffiness, and pallor. *Endocrine System*—Galactorrhea, breast engorgement, amenorrhea, inhibition of ejaculation, and peripheral edema. *Skin*—Dermatitis and skin eruptions of the urticarial type, photosensitivity. *Cardiovascular System*—Changes in the terminal portion of the electrocardiogram have been observed in some patients receiving the phenothiazine tranquilizers, including Mellaril (thioridazine hydrochloride). While there is no evidence at present that these changes are in any way precursors of any significant disturbance of cardiac rhythm, several sudden and unexpected deaths apparently due to cardiac arrest have occurred in patients previously showing electrocardiographic changes. The use of periodic electrocardiograms has been proposed but would appear to be of questionable value as a predictive device. *Other*—A single case described as parotid swelling.

Mellaril®
(Thioridazine HCl)
25 mg. t.i.d.

for moderate to severe anxiety and mixed anxiety-depression

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...now fast relief of hay fever symptoms with

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When pollens fly, just one or two squirts of NTz in each nostril, followed in a few minutes by a second spraying, shrink swollen nasal passages almost on contact. And breathing comfort follows. The antihistamine component of NTz helps combat the allergic reaction and lessen rhinorrhea, sneezing and itching; its antiseptic wetting agent promotes rapid spread of components.

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Zephiran® (brand of benzalkonium as chloride, refined) Cl, 1:5000, antiseptic wetting agent

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Contraindications: Hypersensitivity to any component.

Warning: In renal impairment, since liver toxicity is possible, lower doses are indicated; during prolonged therapy consider serum level determinations. Photodynamic reaction to sunlight may occur in hypersensitive persons. Photosensitive individuals should avoid exposure; discontinue treatment if skin discomfort occurs.

Precautions: Drowsiness, anorexia, slight gastric distress can occur. In excessive drowsiness, consider longer dosage intervals. Persons on full dosage should not operate vehicles. Nonsusceptible organisms may overgrow; treat superinfection appropriately. Treat beta-hemolytic streptococcal infections at least 10 days to help prevent rheumatic fever or acute glomerulonephritis. Tetracycline may form a stable calcium complex in bone-forming tissue and may cause dental staining during tooth development (last half of pregnancy, neonatal period, infancy, early childhood).

Adverse Reactions: *Gastrointestinal*—anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis, pruritus ani. *Skin*—maculopapular and erythematous rashes, exfoliative dermatitis; photosensitivity; onycholysis, nail discoloration. *Kidney*—dose-related rise in BUN. *Hypersensitivity* reactions—urticaria, angioneurotic edema, anaphylaxis. *Intracranial*—bulging fontanels in young infants. *Teeth*—yellow-brown staining; enamel hypoplasia. *Blood*—anemia, thrombocytopenic purpura, neutropenia, eosinophilia. *Liver*—cholestasis at high dosage.

Upon adverse reaction, stop medication and treat appropriately.

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Adverse Reactions: Drowsiness at daytime sedative dose levels, skin rashes, "hangover" and systemic disturbances are seldom seen.

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Usual Adult Dosage: As a daytime sedative, 15 mg. (¼ gr.) to 30 mg. (½ gr.) t.i.d. or q.i.d.

Available for daytime sedation: Tablets, 15 mg. (¼ gr.), 30 mg. (½ gr.); Elixir, 30 mg. per 5 cc. (alcohol 7%).

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Contraindications: Infections caused by nonsusceptible organisms; history of penicillin sensitivity.
Warnings: Acute anaphylaxis (may prove fatal unless promptly controlled) is rare but more frequent in patients with previous penicillin sensitivity, bronchial asthma or other allergies. Resuscitative (epinephrine, aminophylline, pressor amines) and supportive (antihistamines, methylprednisolone sodium succinate) drugs should be readily available. Other rare hypersensitivity reactions include nephropathy, hemolytic anemia, leucopenia and thrombocytopenia. In suspected hypersensitivity, evaluation of renal and hematopoietic systems is recommended.
Precautions: In suspected staphylococcal infections, perform proper laboratory studies including sensitivity tests. If overgrowth of nonsusceptible organisms occurs (constant observation is essential), discontinue penicillin and take appropriate measures. Whenever allergic reactions occur, withdraw penicillin unless condition being treated is considered life threatening and amenable only to penicillin. Penicillin may delay or prevent appearance of primary syphilitic lesions. Gonorrhea patients suspected of concurrent syphilis should be tested serologically for at least 3 months. When lesions of primary syphilis are suspected, dark-field examination should precede use of penicillin. Treat beta-hemolytic streptococcal infections with full therapeutic dosage for at least 10 days to prevent rheumatic fever or glomerulonephritis. In staphylococcal infections, perform surgery as indicated.
Adverse Reactions: (Penicillin has significant index of sensitization). Skin rashes, ranging from maculopapular eruptions to exfoliative dermatitis; urticaria; serum sickness-like reactions, including chills, fever, edema, arthralgia and prostration. Severe and often fatal anaphylaxis has been reported (see "Warnings").
Composition: Tablets—125 mg. (200,000 units), 250 mg. (400,000 units), 500 mg. (800,000 units); Liquid—125 mg. (200,000 units) and 250 mg. (400,000 units) per 5 cc.

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ORAL **PEN•VEE® K**

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from the discord of anxiety...



to emotional harmony

with the aid of antianxiety

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In an age of swift change and challenge, susceptible individuals may experience varying degrees of excessive anxiety. The resulting emotional stress may precipitate significant functional disorders or complicate existing organic disease. In properly individualized maintenance dosage, Librium (chlordiazepoxide HCl) quickly helps relieve anxiety and apprehension, provides useful adjunctive therapy in psychophysiologic disorders—yet seldom impairs mental acuity or ability to function. Librium has demonstrated a wide margin of safety in short- and long-term therapy.

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(chlordiazepoxide)

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Before prescribing, please consult complete product information, a summary of which follows:
Indications: Indicated when anxiety, tension and apprehension are significant components of the clinical profile.
Contraindications: Patients with known hypersensitivity to the drug.
Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards.
Precautions: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.
Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

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THE JOURNAL
of
The Maine Medical Association

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Warning: Although generally safer than the omphetamines, use with great cautian in patients with severe hypertension or severe cardiavascular disease. Da not use during first trimester of pregnancy unless patential benefits outweigh potentiol risks.

Adverse Reactions: Rarely severe enough ta require discantinuation of therapy, unpleasant symptams with diethylpropion hydrochloride have been reported to occur in relotively low incidence.

As is charocteristic of sympathomimetic agents, it may occasionally cause CNS effects such as insamnia, nervausness, dizziness, anxiety, and jitteriness. In cantrast, CNS depression has been reported. In a few epileptics an increase in canvulsive episades has been reparted.

Sympathomimetic cordiavoscular effects reparted include ones such as tachycardia, precordial poin, orrhythmia, palpitation, and increased bload pressure. One published report described T-wave changes in the ECG af a healthy yaung male after ingestian af diethylprapian hydrochlaride; this was an isolated experience, which has not been reported by others.

Allergic phenamena reparted include such canditians as rash, urticaria, ecchymasis, and erythema.

Gastraintestinal effects such as diarrhea, constipatian, nausea, vomiting, and abdominal discamfart have been reparted.

Specific reports on the hematopoietic system include two each of bone morrow depression, agranulacytosis, and leukopenia.

A variety of miscellaneous adverse reactions have been reparted by physicians. These include complaints such as dry mouth, headache, dyspnea, menstrual upset, hair loss, muscle pain, decreased libida, dysuria, and palyuria.

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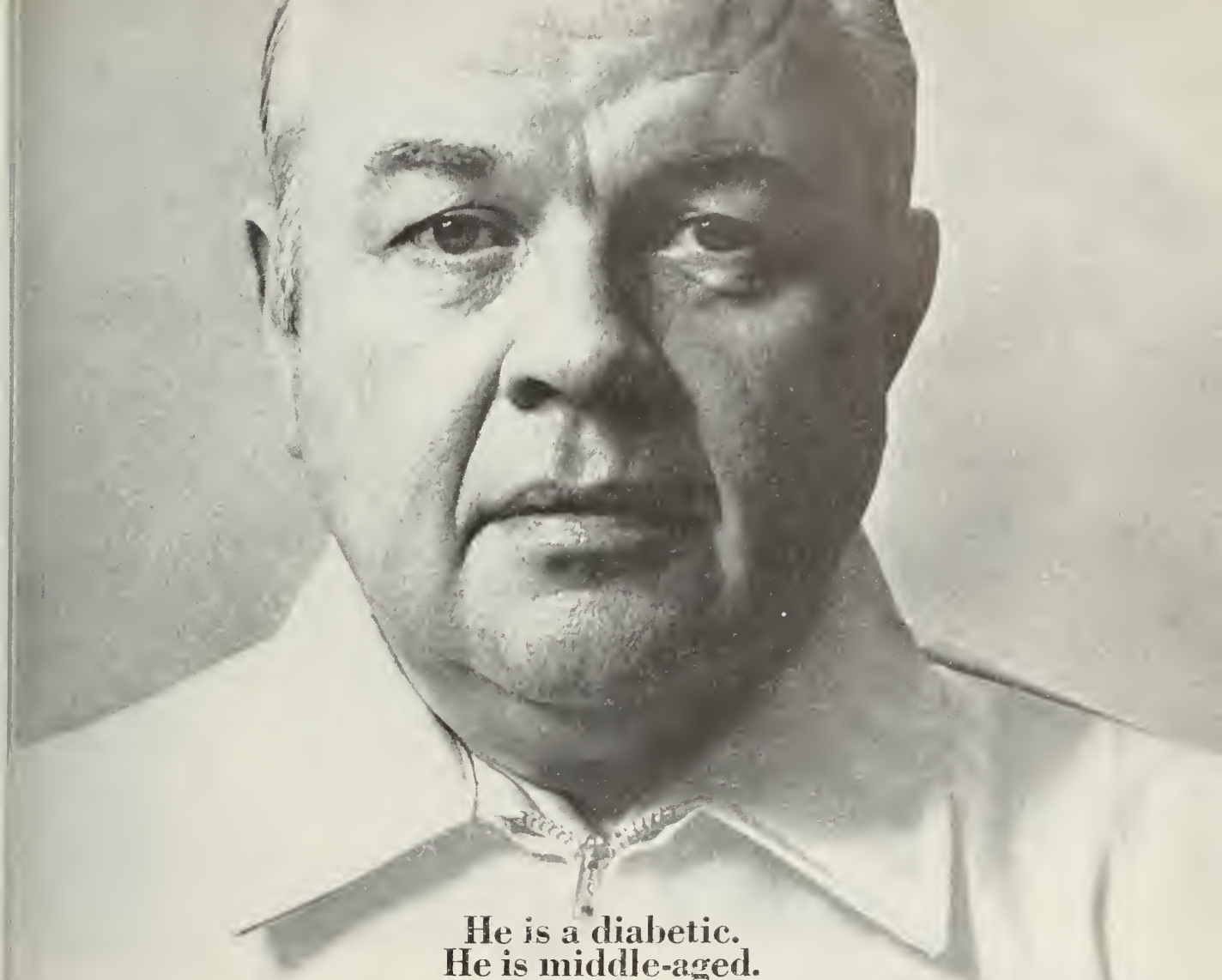
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Warning: In renal impairment, usual doses may lead to excessive accumulation and liver toxicity. Under such conditions, lower than usual doses are indicated, and, if therapy is prolonged, serum level determinations may be advisable. A photodynamic reaction to natural or artificial sunlight has been observed. Small amounts of drug and short exposure may produce an exaggerated sunburn reaction which may range from erythema to severe skin manifestations. In a smaller proportion, photoallergic reactions have been reported. Patients should avoid direct exposure to sunlight and discontinue drug at the first evidence of skin discomfort. Necessary subsequent courses of treatment with tetracyclines should be carefully observed.

Precautions: Overgrowth of nonsusceptible organisms may occur. Constant observation is essential. If new infections appear, appropriate measures should be taken. In infants, increased intracranial pressure with bulging fontanels has been observed. All signs and symptoms have disappeared rapidly upon cessation of treatment.

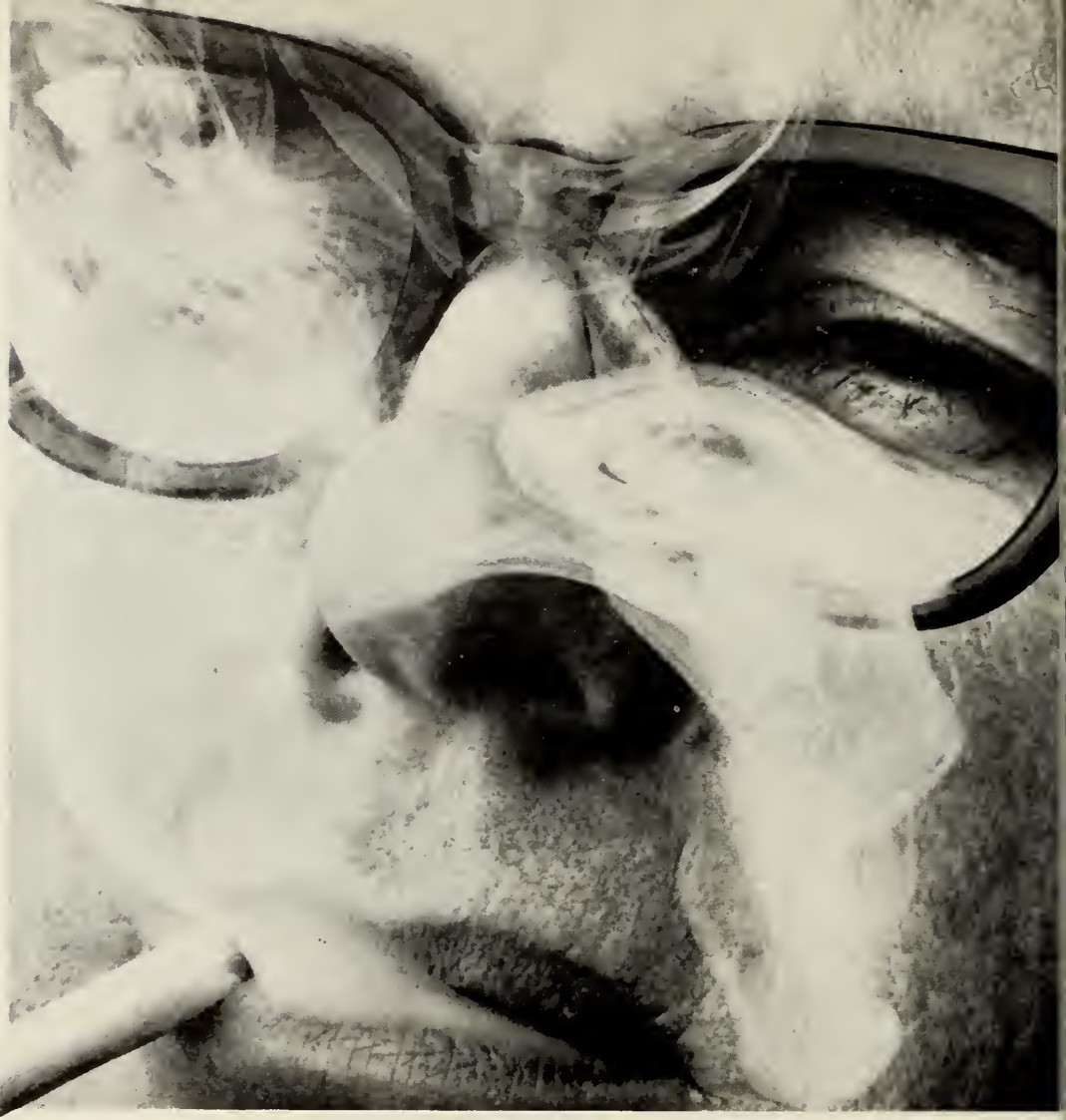
Side Effects: Gastrointestinal system—anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis, pruritus ani. Skin—maculopapular and erythematous rashes; a rare case of exfoliative dermatitis has been reported. Photosensitivity; onycholysis and discoloration of the nails (rare). Kidney—rise in BUN, apparently dose related. Transient increase in urinary output, sometimes accompanied by thirst (rare). Hypersensitivity reactions—urticaria, angioneurotic edema, anaphylaxis. Teeth—dental staining (yellow-brown) in children of mothers given this drug during the latter half of pregnancy, and in children given the drug during the neonatal period, infancy and early childhood. Enamel hypoplasia has been seen in a few children. If adverse reaction or idiosyncrasy occurs, discontinue medication and institute appropriate therapy. Demethylchlortetracycline may form a stable calcium complex in any bone-forming tissue with no serious harmful effects reported thus far in humans.

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CONTRAINDICATIONS: Patients with glaucoma; prostatic hypertrophy and benign bladder neck obstruction; known hypersensitivity to chlordiazepoxide HCl and/or clidinium bromide.

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or here.



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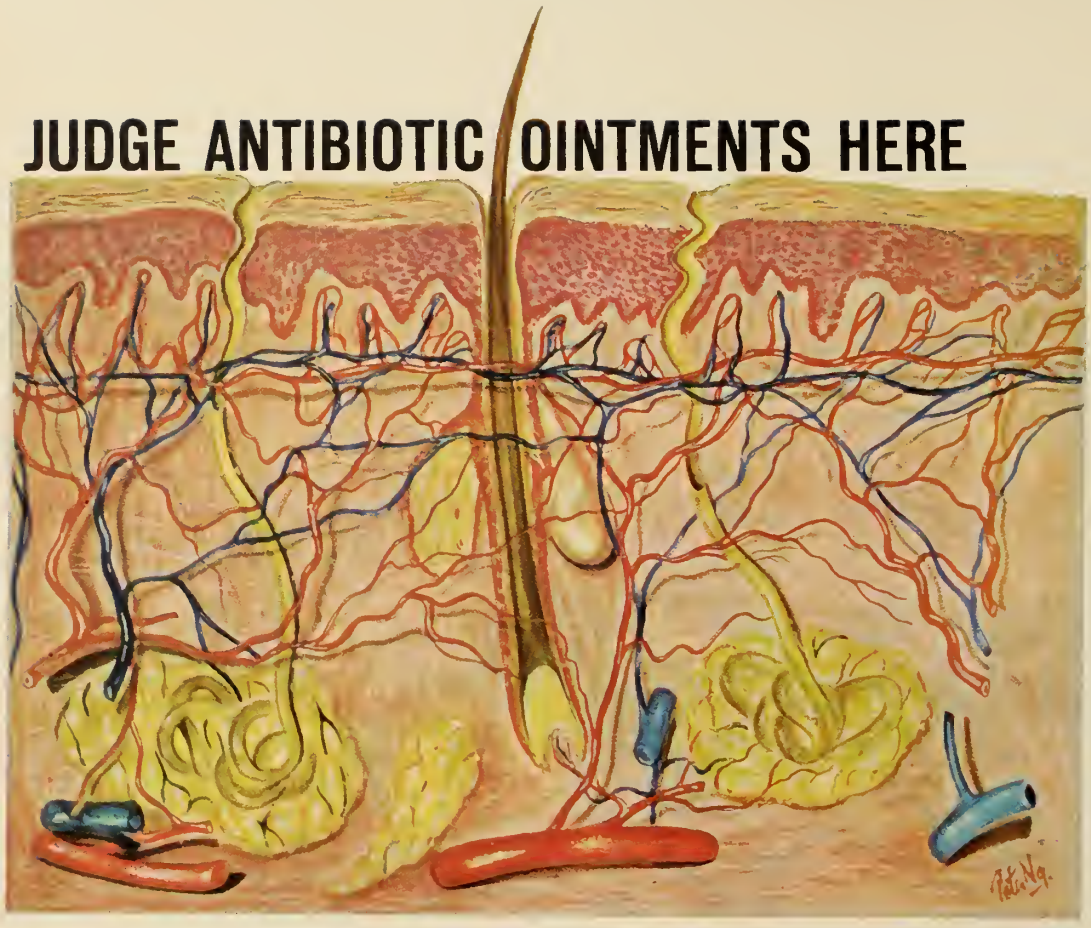
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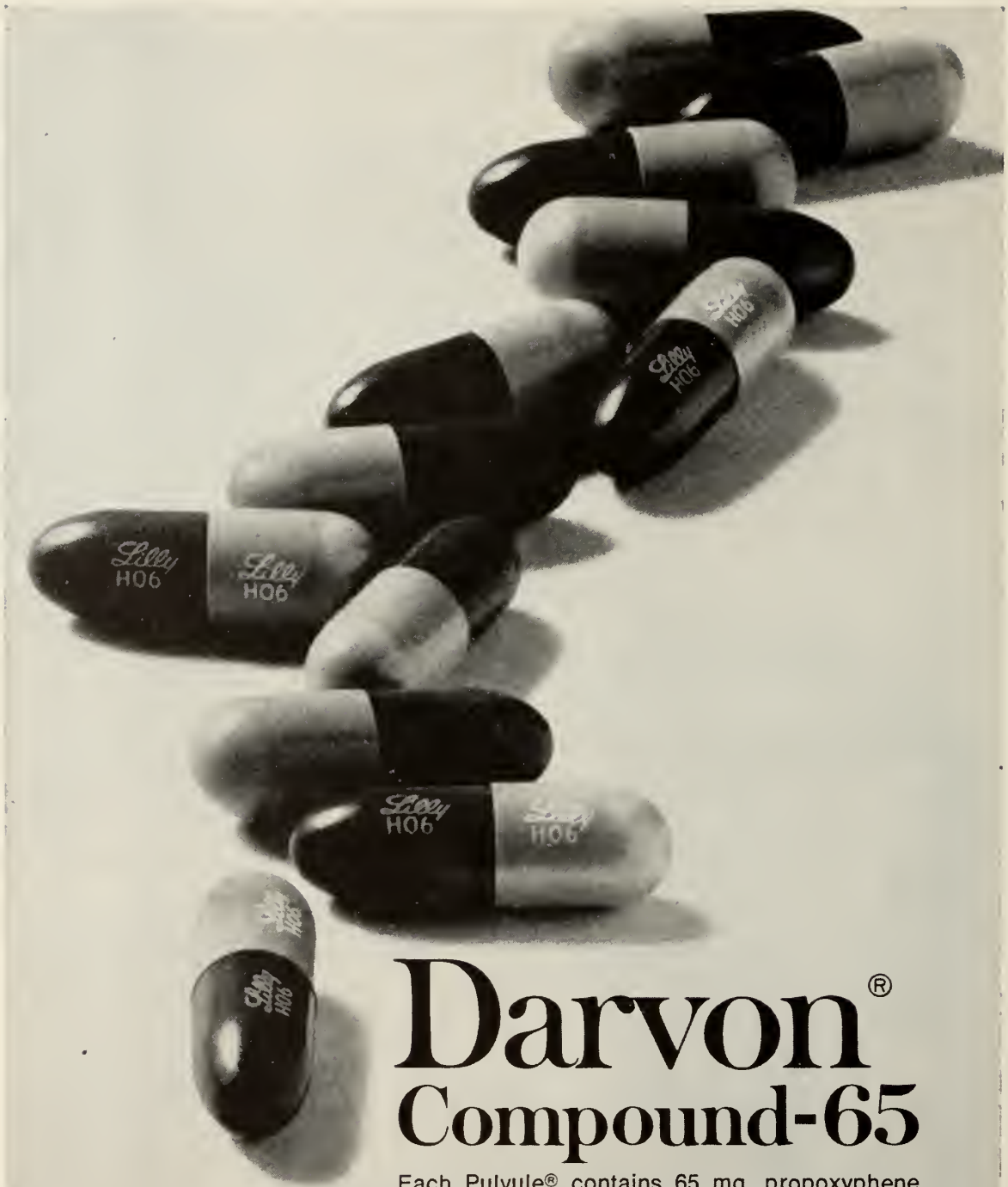
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The Journal
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President's Address*

Asa C. Adams, M.D.

It is with feelings of both gratitude and regret that I finish my term as President of the Maine Medical Association. Gratitude for the privilege of serving in this capacity, and regret for not having been able to accomplish all the goals I had set for this year. I would like, too, to express my thanks and appreciation for the help and inspiration extended to me by the officers, members of the Council, and committees who have worked with me in the Association. I am especially grateful to Mrs. Kennard and Dr. Hanley, for without their help it would have been impossible for me to carry on. The many conferences and state and national meetings have been time consuming, but most worthwhile. During March and April I was incapacitated with a fractured hip, and I regret that I was unable to attend all of the county meetings, as I had planned.

In this era of medicine when Federal and State governments are shaping and influencing medical progress, it is important that physicians realize something of the quality of medicine as practiced in those areas where real socialized medicine exists. I have often asked myself whether medicine under socialism would be better for the average citizen, and if it would remedy the defects which may exist in this capitalistic form of democracy. Hence, I welcomed the opportunity to observe socialistic medicine at first hand in Russia.

Vina and I had the privilege of spending three weeks behind the Iron Curtain last fall, the greater part of the time being spent in Leningrad and Moscow; and with your indulgence, I will devote my time to discussion of some aspects of Russian life, particularly as it pertains to medicine.

A group of twenty-five people consisting of physicians, wives, and relatives under the auspices of People to People made up our party. The People to People Organization was founded by the late President Eisenhower for the purpose of encouraging professional people to travel to foreign countries, and by visiting their professional counterparts, become better acquainted and promote goodwill particularly among people of opposite political beliefs. The central office of People to People is supported by donations from individuals and foundations, and travelers pay their own expenses.

We visited medical institutions, heard lectures, watched doctors at work, and at the end of each visit had a dinner with local doctors and their wives as our guests. We traveled by plane and our itinerary took us to Brussels, Stockholm, Leningrad, Moscow, Warsaw, Budapest, and East and West Berlin.

In this discussion, I will consider with you various aspects of Russian life, particularly medicine in Russia. I realize that it would be presumptuous of me to pose as an expert on this subject after so brief a visit, and my efforts will be to give you only my impressions.

It was evident to us on entering Russia that a concentrated effort is being made to influence Russian citizens against capitalistic countries, especially the United States. In airports and other public places, literature and pictures were displayed depicting the horrible lot of the working classes in free countries. Pictures showing police brutality in Negro mob scenes were shown as common occurrences. Literature glorifying life under Communism and the soundness of Lenin's teachings was free. It is very obvious that an organized campaign against capitalism is ruthlessly being promoted.

Travel is restricted both inside and outside Russia and permits must be obtained to move about. Tourists must have the official Intourist guides and are shown only what they are supposed to see. Native Russians are not allowed to travel outside their own country except by special visas which are granted sparingly, and salaries, in general, are so low that people do not have money to travel.

Russia is still a police state, and we saw many evidences

*Presented at the 1969 annual session of the Maine Medical Association.

of this even in our short stay. An attempt by one of our group to present a gift to a Russian physician was refused until we were alone with him and he explained that such practices were frowned upon, and that he might be demoted in his position or given a smaller apartment as punishment.

Most Russians are atheists. Vera, our Intourist guide, expressed this well when she said, "Science is the basis of all life. We worship only the state and do not need God or religion."

Medical education is provided free by the state, as is all education. In fact, students are paid a fee while in training. The physician's place in society is very near the bottom of the ladder and they are paid only a small salary. About 80% of the doctors are women and the average physician receives the equivalent of $110.00 a month, so that in order to live, every adult member of the family must work.

Distribution of doctors both geographically and in specialties is regulated by a central committee which determines where each doctor locates and what specialty he shall study and practice. Thus physicians are located in the bleak and barren wastelands of Siberia as well as in urban Moscow and Leningrad. Soviet Russia now boasts 600,000 physicians, the highest doctor to population ratio in the world.

Theoretically, office type practice and house practice is carried on in huge polyclinics, one such unit covering about 20,000 people. People come to these centers in large numbers, have no choice of physicians, are treated and return home. Emergencies are admitted to hospitals or placed on waiting lists.

In the large centers such as Moscow and Leningrad where one would expect the latest and best equipped hospitals, we found the equipment rather poor and antiquated. We saw operating rooms with two teams of surgeons in the same rather small room. Sterile technique, as we know it, is lacking. We were allowed to enter without gowns and allowed to take pictures in the operating room, if we so desired.

Abortions are allowed to anyone who so wishes, and in one hospital that we visited 4,000 abortions and 3,000 deliveries were done yearly. We witnessed one abortion where the patient administered her own anesthetic. The female surgeon did not scrub, handled instrument controls which were not sterile with her gloved hands, and did not bother to wear a sterile gown. We were unable to get statistics on their infection rate.

Each member of our group left Russia feeling that medicine in the United States is far superior in quality to theirs. As we traveled to clinics, polyclinics, and hospitals, and saw people waiting in line or sitting in groups to be seen by physicians not of their choice, to be disposed of in an assembly line manner, my feeling was that the art of medicine is entirely missing. Human sympathy and compassion, which must go along with the science of medicine to make it successful, has been lost, and the practice of medicine has become a mechanized science — which I hope will never happen in this country.

I am convinced that neither patient nor physician would wish to tolerate that type of medicine in the United States. Let us work with government agencies, public health and welfare departments, and citizen groups to continue to give to all people better medical care, but never allow medicine to become impersonal and socialistic.

We physicians should be disturbed about many problems in health care today; chiefly, the mounting cost of medical care, and find solutions to remedy this whenever possible: first, by keeping fees for service within reasonable limits; second, by using home care, boarding home and nursing care when possible, and making hospital stay for patients as brief as feasible.

We must endeavor to aid distribution of physicians by encouraging the building and staffing of rural hospitals, establishing clinics and group practice in rural areas and the training of para-medical personnel.

We should establish a closer liaison with the A.M.A., which is your voice nationally in providing good medical care. It deserves your support, not as a spectator but as a participant. Every physician who has really taken part in its activities becomes increasingly convinced that the picture of the physician in the eyes of the public is the prime concern of our national organization, and that good medical care for all people is its goal. This can be accomplished only through your active support.

Social change confronts us on all sides, and rebellion and protest is the order of the day. I believe that as long as the medical profession, which in this country offers the highest type of medical care of any area in the world, continues to keep the patient's welfare foremost, continues to be a participant rather than being merely a spectator, we can go on to be proud that we are physicians.

In closing, let me thank you again for the honor you have bestowed upon me, in having served as your president.

Osteoid Osteoma

Allan J. Stinchfield, M.D.

Pain is the most common symptom that has to be treated and investigated in the practice of medicine. This article deals with one of the less common causes of pain: one which has never been discussed in the Maine Medical Journal.

Superficial causes of pain; such as, skin trauma and infection are readily seen, diagnosed and treated. Pain caused by osteoid osteoma is not readily diagnosed. It originates from an obscure bony lesion that is benign but often very debilitating. Because the lesion is often hard to find, it is usually late in being diagnosed.

Osteoid osteomas occur in all bones except the skull. They are most common in the lower extremities with over half the reported cases located in the femur. Some collections of cases have had from 10-25% of the lesions in the vertebral column. Here, the lesion is especially obscure and may even give radicular pain. It is most common in persons between 10-30 years of age and twice as common in males as in females.

Symptoms: Pain begins as a mild complaint. It is usually of many months duration before it is called to the attention of a physician. It is frequently attributed by the patient to a joint disorder, muscle pain or, in a few cases, to an old trauma. The pain does become intense, persistent and usually worse at night. Point tenderness may develop. Swelling, redness and heat are uncommon. Aspirin may offer relief.

Diagnosis: is solely by x-ray and microscopy. Unfortunately, early lesions are often unobservable and show only months after the onset of the pain. In back cases, malingering may be suspected because the lesion was not revealed by x-ray.

Roentgenographic Findings: In a long bone, the lesion usually appears as a rather ill defined, increased, diffuse sclerosis. Usually, the location is in the diaphysis or metaphysis but has been seen in the epiphysis. To bring out the significance of the minimal sclerosis or enlargement, it is often necessary to compare with x-rays of the opposite extremity. Also contrasting films of the extremities with a relative decrease in Kv. and increase in milliampere-seconds should be taken. It is sometimes only then that a small rarefied, well-circumscribed, oval or round area with a minute shadow of increased density at the center may be seen. X-rays taken at different angles are also helpful. The central rarefied or partially rarified area is surrounded by bone of increased density. In x-ray appearance, medullary lesions tend to be more typical than cortical or juxtacortical ones. In long standing cases, the enlargement, thickening and sclerosis of the cortex may extend several centimeters from the center of the lesion.

Morbid Anatomy: is relatively constant and would be expected to give relatively constant radiographic findings. When the lesion is removed en bloc from a large bone, the principle mass consists of cortical and cancellous bone; the cortical and medullary structures are in irregular and unusual arrangement. The nidus of osteoid tissue is in a vascular fibrous matrix which leaves the radiolucent zone so characteristic in the x-ray. Outside this, is the sclerotic bone which is often homogeneous but when the lesion is cortical, the sclerotic layer may be laminated. The central lesion itself is small and not always readily located macroscopically. It is described as deep red, brown, purple or gray tissue, usually not more than a centimeter in size.

Prognosis: It may rarely be self limiting but the usual case has been so long standing and so annoyingly painful that treatment in the form of total excision is indicated. Recurrence rarely takes place and removal of all the surrounding sclerotic bone is not necessary as long as the nidus is removed. Postoperatively, relief of pain is almost immediate.

Microscopy: Sections through the midportion are very characteristic. The central area has one or more nidi of osteoid tissue usually with some calcification. Aegerter and Kirkpatrick report, "The osteoid dominates the field but in the interstices between its ramifications, there is a moderately loose rather vascular matrix of elongated and spindled cells which appear to be fibroblasts undergoing transition into the more cuboidal cells which form a layer of osteoblasts over the solid osteoid nucleus. As one progresses toward the periphery, the crude osteoid merges into a network of very fine spicules of more mature bone. Osteoblastic activity is often quite apparent about these structures. The miniature spicules are arranged radially around their respective nidi. At the extreme edge, they appear to press against but do not merge with the massive spicules of lamelated bone that runs in the opposite direction to surround the lesion. Cartilage appears to play no role in the genesis of this lesion. . . ." Hemorrhage is not a factor. Sections from curetted fragments are more difficult to diagnose.

Etiology: Jaffe, in 1935, gave the first definite paper and concluded at that time, that the lesion must be neoplastic. Aegerter and Kirkpatrick disagree with him and write, "Perhaps, as Golding suggests, it may be due to pressure, causing a relative ischemia. This, in turn, causes



Fig. 1. Mrs. J. B. A routine x-ray of the tibia was reported as normal but closer examination showed a small oval area of questionable structure in the medullary canal of the mid-tibia. This is the 2nd x-ray with reduced Kv. and increased milliampere-second. It shows an osteolytic lesion in the center of the medullary canal. It was not typical of the advanced osteoid osteoma probably because symptoms were only of three months' duration.

a laying down and mineralization of an abnormal amount of organic matrix."

Differential Diagnosis: Osteoid-osteoma may be confused with Brodie's abscess, chronic sclerosing osteomyelitis, sclerosing osteogenic sarcoma, syphilitic osteitis, tuberculosis, arthritis, healed fracture, rheumatoid arthritis, loose bodies, chronic sepsis, normal extra ossicles and osteoblastoma.

Case Reports

Case #1. Mrs. J. B., age 34, had trouble that started three months before she was examined. She was awakened at night with aching and sharp pains in the right ankle and lower leg. This discomfort would last about an hour nightly. Recently, the pain was dull and would begin about 10:00 p.m. She noticed no heat, no redness and no swelling. The pain was all in the tibial region except when real severe, it radiated into the toes. Walking did not aggravate the condition.

Previous history was negative except that the index finger had been sore for two days; her periods were irregular; and by dieting, she had lost 20 pounds in the last 5 months.

Examination revealed the right knee and ankle to be negative. Tenderness was present in the mid-tibial region. There was no heat, no redness and no swelling in the area. There was no motor, sensory or circulatory disturbance.

The first diagnostic procedure was x-raying the ankle. The x-ray reading was normal. X-rays of the tibia were reported to be normal but closer examination showed a small oval area in the medullary canal of the mid-tibial area, on the lateral view. This was suspected to be a water mark or possibly a bony defect. Oblique views also were taken. The films were considered not good; so a spot film of the area was taken. The Kv. was reduced and the milliampere-seconds was increased. Fig. 1 shows that the new x-ray demonstrates a definite defect in the suspected central section. The change in technique of taking the roentgenogram produced a good film and made a definite diagnosis of an osteolytic lesion possible.

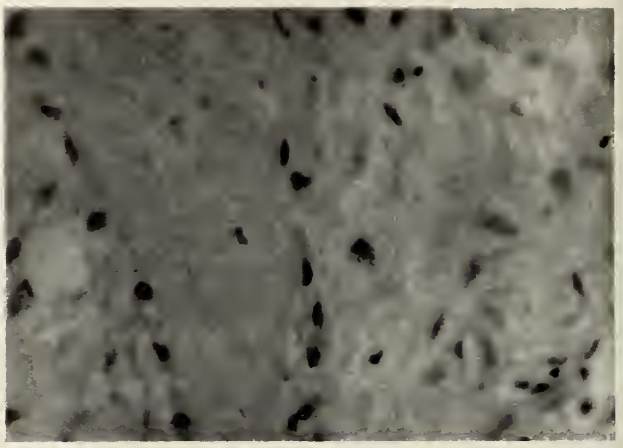


Fig. 2. A trabeculum of newly formed bone laying on a background of osteogenic tissue.

Following the diagnosis, surgery exposed and removed the lesion. Microscopy proved the diagnosis of osteoid osteoma. Now, nine months later, the patient is still pain-free. Fig. 2 shows the microscopic picture.

Case #2. A. R., age 10, complained of pain and limitation of motion of the right elbow of two years' duration. Five years previously, he had fractured both bones of the distal forearm. Healing from which was uneventful with good results. Two years ago, the boy began having pain in the elbow with some limitation of motion. This was thoroughly examined by x-rays. Latex fixation tests, sedimentation rate and CBC were done. The pain was not especially severe. It often occurred at night and was relieved by aspirin. The limitation of motion gave him trouble in throwing a ball. There was no swelling. There was some muscle atrophy. The first x-rays, taken in 1966, were read at another hospital as negative Fig. 3. In retrospect, the osteoid osteoma was clearly visible. However, it was in the region of the olecranon fossa of the humerus where there usually is thinning of the bone and, for that reason, the lesion was not diagnosed. The x-rays showed considerable surrounding cortical thickening, enlargement and sclerosis, as well as a radiolucent area with a small dark nidus in the center. Fig. 4 is the x-ray taken in 1968.

The Previous History was negative except for numerous allergies.

Physical Examination revealed 30° of permanent flexion with further flexion to 160°. Some tenderness was present over the medial epicondyle of the humerus and also some over the distal humerus in the region of the olecranon. There was no heat, no redness and no swelling of the joint.

En bloc excision of the lesion from a posterior approach gave total relief of pain. In one month, he was using the elbow in all activities. In three months, he had regained his former range of motion. In nine months he was symptom free but had not increased the range of motion. Fig. 5 shows a microscopic slide from this lesion.

COMMENTS: Osteoid osteomas are a cause of chronic pain; may be hard to diagnose; can be dramatically cured and are routinely suspected by the orthopaedic surgeon in obscure causes of pain.



Fig. 3. A. R. X-rays of both elbows in 1966 show an osteoid osteoma in the right olecranon fossa.



Fig. 4. A. R. This x-ray in 1968 shows a central nidus with a radiolucent surround area. This, in turn, is surrounded by increase sclerotic bone.

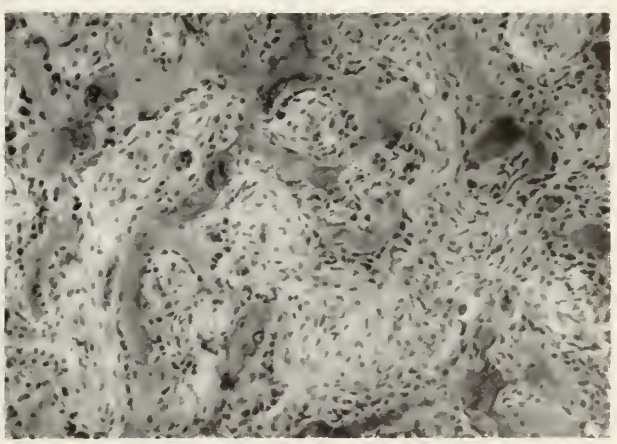


Fig. 5. Osteoid material and new bone trabeculae imbedded in osteogenic stroma with rich vascularity.

ACKNOWLEDGMENT

The slides, Figs. 2 and 5, were provided through the courtesy of Irving I. Goodof, M.D. of the Thayer Hospital in Waterville, Maine.

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Box 343, Augusta, Maine 04330

Experience With Coronary Care Unit In A Community Hospital

BRINTON T. DARLINGTON, M.D.

The Coronary Care-Intensive Care Unit at the Augusta General Hospital admitted its first patient on November 13, 1968.

Prior to the opening, the head nurse attended a four-week course at Boston University Hospital and the remaining selected staff nurses underwent a program of instruction and on-the-job training at the Veterans Administration Facility at Togus under the direction of Robert Ohler, M.D., Jacob Dana, M.D. and Miss Jean Akley, R.N.

The medical staff of the Augusta General Hospital who took part in an in-hospital training program for the 10 weeks prior to opening of the unit, were granted the privilege of admitting patients. The programs covered resusitation, drug therapy, defibrillation, and electrocardiographic interpretation. The groups also worked out standing orders and procedures for the unit.

A four-bed ward was designed for a coronary respiratory care unit with a central monitor and four monitored beds.

Review of admissions over the previous two years indicated approximately 80 myocardial infarctions had been treated annually. It was felt that a combination of coronary and intensive care would more efficiently utilize the nursing services since an average occupancy of two coronary patients was projected. Coronary patients were given priority in bed occupancy with final decision by the Unit Director.

After six months of operation, an evaluation of the unit operation was made. The patients were divided into four groups.

A. Myocardial infarction.

B. Suspected infarction – not confirmed.

C. Other cardiac problems (arrhythmus, patients for cardioversion, and severe congestive failure).

D. Intensive Care – including severe injuries, post-operative thoracic and brain surgery problems, and peritoneal dialysis patients.

During the six-month period from November 13, 1968 to June 13, 1969, there were 51 patients admitted for suspected myocardial infarction.

Admitted suspected myocardial infarction – 51
- A. Confirmed – 39
- B. Not Confirmed – 12

Of the confirmed infarctions, 25 were men and 14 were women. The average age of each group was 63 years.

The patients spent 212 days in the unit with average stay of 5.43 days.

There were 6 deaths (15.4%): 3 occurred the 1st day; 2 occurred the 3rd day; 1 occurred the 4th day.

Four post mortem examinations were done and extensive myocardial damage was confirmed.

Twelve patients did not have infarction and were observed for 42 days – an average stay of 3.5 days.

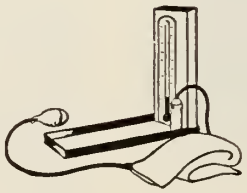
Other patients with heart disease including arrhythmus and severe congestive failure included 13 patients who stayed 75 days – an average of 5.8 days.

The total average daily bed occupancy of cardiac suspect and infarction cases was 1.8 beds.

At no time was it necessary to transfer a coronary patient out of the unit when it was considered risky. The number of intensive care patients treated depended on the number of beds available, but totaled 226 days with a daily average of 1.24 beds occupied.

After six months experience, the staff feels that intensive care and coronary care patients should not be treated in a single unit and a new unit is being planned which will separate the groups. A unit expandable to four beds seems of satisfactory size to handle a community hospital with approximately 80 myocardial infarctions per year.

Doctors Park, 89 Hospital Street, Augusta, Maine 04330



The Water Test in Evaluation of Gastroesophageal Reflux

Demitrios Nikolaidis, M.D.

Allison[1] in 1951 felt that the essential feature of a sliding hiatal hernia was a valve failure at the cardia which results in regurgitation of gastric fluid from the stomach into the esophagus. It has become evident since then, however, that this is not so and that there is very little correlation between the presence of a hiatal hernia and reflux esophagitis. The size of the hernia has almost no correlation with the patient's complaint. Furthermore, it has become known that severe symptomatology related to gastroesophageal reflux may be present although no hiatal hernia could be demonstrated by the radiologist using all the many different techniques, positions, and maneuvers that have been reported and used.

The hiatal hernia and the gastroesophageal reflux are still subjects of great debate among surgeons, gastroenterologists, internists, and radiologists. The sphincter mechanism is a very complex one and, as yet, there is no widely accepted concept of its mechanism. There is not only a difference of opinion about the physiology of this area but also there is great controversy about the normal anatomy and the anatomy in hiatal hernia. In evaluating patients with symptoms related to reflux and hiatus hernia the tools are a G.I. series, esophagoscopy, determination of the intraluminal ph of the lower esophagus, and the acid perfusion test described by Bernstein.[2]

Since reflux is an intermittent phenomenon, it is possible not to be seen in an upper G.I. examination. A test which is of interest is the "Water Syphonage Test" described by DeCarvalho[5] in 1951. It is the most simple for the patient. If reflux is present and demonstrated, it is of considerable significance. Several related reports have appeared at different times in the literature by Crummy[4], Brombart[3], Linsman[7], and others.

Hiebert[6] and Belsey in their excellent paper have reviewed and discussed the diagnosis, treatment, and follow-up of patients with the isolated defect of the hiatal valve mechanism. Their diagnosis was based on the clinical picture, esophagoscopy, and upper G.I. series. They did not use this test.

Technique

After the completion of the upper G.I. examination, the patient is placed on the table in the right posterior oblique position so that the barium is filling the cardio-esophageal junction. The degree of rotation is variable according to the patient. The patient is then asked to swallow water while at the same time, the cardio-esophageal junction is observed fluoroscopically. Normally, there should not be any reflux of barium from the stomach into the lower esophagus. On the other hand, it is possible that a very small amount of barium may be seen to reflux into the very distal esophagus and this should not be considered of any definite significance. The test is considered positive if a large quantity of barium is seen to rush back from the stomach into the esophagus reaching the level of the aortic arch. This finding is recorded on spot films. A small arrow made of lead is attached to the spot film device. This is pointing to the patient's head. The direction of the arrow indicates that the barium seen on the spot films did not come from above but refluxed from the stomach into the esophagus. The level which the barium had reached during its reflux can, too, in this way, be recorded and evaluated on the obtained spots.

Results

Five hundred patients referred to the X-Ray Department for upper G.I. series were examined by this test with the intention of evaluating the incidence of this finding in symptomatic patients and of establishing its reliability. The patients' symptomatology was recorded and the patients were specifically questioned as to whether or not they had heartburn, pyrosis, or the so-described by the patients "water brush." Another symptom that was often mentioned by some of the patients was retrosternal pain radiating to the back between the shoulder blades.

Of this group of patients sixty-six with related symptomatology, mostly heartburn and pyrosis, were found to have a positive water test. These patients had no other radiographic changes of upper G.I. pathology including a negative gallbladder series. Twenty-five patients with related symptoms had the reflux demonstrated, but this was associated with hiatus hernia and/or lower esophageal ring. Seven patients with a positive water test had active ulcer disease. Four had a positive water test, hiatus hernia, radiographic changes of esophagitis with evidence of esophageal ulceration. It is of interest to note that seven patients from this group had a positive water test but did not give any history of related symptomatology.

Discussion

This study was attempted in order to evaluate the water test, particularly in patients with symptoms indicating gastroesophageal reflux and with otherwise negative routine upper G.I. examinations. 13.2% of this group of five-hundred patients who had symptoms like heartburn, regurgitation, pyrosis, and some with retrosternal pain were found to have a positive water test but no other G.I. pathology. This number does not include the patients

*Department of Radiology and Nuclear Medicine, Augusta General Hospital, Augusta, Maine 04330.

TABLE 1

The Water Test in our Group	*No. of Cases*
Positive test in patients with related symptoms but no other G.I. pathology	66
Positive test in patients with related symptoms, but with associated hiatal hernia or esophageal ring, or both	25
Positive test in symptomatic patients but with associated hiatal hernia and esophagitis	4
Positive test in symptomatic patients but with associated ulcer disease	7
Positive test in asymptomatic patients	7
TOTAL PATIENTS EXAMINED	500

with the positive water test but with associated other demonstrable G.I. pathology (See Table 1). One of the patients had similar symptoms for ten years. Another patient complaining of these symptoms was referred to us from another hospital. He had had ten previous upper G.I. examinations which were reported negative. The presence of the positive water test in asymptomatic patients is somewhat puzzling. The frequency of the reflux, the ph and the length of time that the refluxed material remains in the esophagus may be related to this group.

SUMMARY

Gastroesophageal reflux may be demonstrated by the water test. This becomes important especially in those symptomatic patients in whom the routine upper G.I. examination is negative. This test does not interfere with the routine roentgen examination of the gastrointestinal tract. It is very easily performed in a very short time and with no discomfort to the patient. No attempt was made to evaluate the mechanism and to study the physiopathology explaining this fluoroscopic observation. This finding is probably related to an incompetent sphincter mechanism resulting in regurgitation and consequently related symptomatology.

This test has become part of the routine upper G.I. examinations performed in our Department of Radiology for patients in whom gastroesophageal reflux is suspected from the history.

ACKNOWLEDGEMENT

I would like to express my appreciation to the technical personnel of the Department of Radiology, and in particular to our secretary, Gail Mohrbacher for helping me to gather the data necessary for this study.

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SPECIAL ARTICLE

Planned Audit of Medicare and Medicaid Payments*

The Internal Revenue Service plans to audit the federal income tax returns of physicians and other health practitioners who have received more than $25,000 a year in medicare and medicaid payments.

Plans for the special audit were disclosed by IRS Commissioner Randolph W. Thrower at the first of a series of public hearings the Senate Finance Committee is holding in its investigation of the rising costs of the two government health care programs. He said the Department of Health, Education and Welfare had agreed to require intermediary insurance carriers to use physicians' social security numbers on reports of payments under the program in the future.

Finance Committee Chairman Russell B. Long (D., La.) estimated "possibly as many as 10,000" had been getting upwards of $25,000 a year under the programs. Thrower said the initial audits would be for 1967 and would be limited to those receiving more than $50,000.

Long said that the investigation of the committee's staff so far showed "widespread abuse, and fraud, as well as lax administration."

Robert M. Ball, social security administrator, reported his investigators had looked into more than 700 possible fraud cases under medicare. He said more than 300 of these cases were still in some stage of inquiry, and that 14 had been turned over to the Justice Department for prosecution.

"But these should not be taken as a reflection on the 200,000 doctors participating in medicare," Ball said. He added a bigger problem than outright fraud were "cases that don't quite become fraud."

HEW Undersecretary John G. Veneman told the committee that the Nixon Administration wants congressional authority to stop medicare payments to doctors who overcharge, use inferior supplies or engage in fraud.

"Under present medicare law, there is no authority for the program to deny reimbursement to a licensed practitioner, who has demonstrated a clear pattern of fraud, repeated overcharging of the program or the use of supplies which are inferior or harmful," Veneman said.

"We are recommending authority . . . to discontinue future reimbursement and to put all parties on notice to this effect where on the basis of clear evidence, a finding is made that this is justified by reason of such abuses."

Commenting on the hearings, Dwight L. Wilbur, M.D., president of the American Medical Association, said that the vast majority of physicians serving medicaid patients are not overcharging for their services.

"Most physicians," Dr. Wilbur said, "are acting honorably and with utmost restraint. Fortunately, very few M.D.'s participating in medicaid are guilty of overcharging and otherwise exploiting the program. Such exploitation by a minuscule minority was unavoidable. . . .

". . . The medical profession is making a great effort to identify and weed out dishonest doctors who betray their oath as professional men serving the public. We have been successful in this search, but a few physicians remain who still are not identified. We shall search them out and expose them, for the good of the entire profession."

Meantime, HEW issued a regulation limiting the fees paid by states to physicians, dentists and other health practitioners under medicaid.

Under the regulation, a state's medicaid payment to a physician for a service will be limited, with one exception, to the 75th percentile of the customary charge – the maximum customary fee of 75 percent of the physicians in the area.

If a state has been paying more than the 75th percentile of the customary charge, it must not exceed the medicare level, about the 83rd percentile. A medicaid official said that only two states may have to roll back their fees, but declined to name them.

After July 1, 1970, states may request permission to increase physicians' fees above the 75th percentile if two conditions are met:

1. The average percentage increase requested above the 75th percentile on January 1, 1969, may not exceed the percentage increase in the all-services component of the Consumer Price Index (adjusted to exclude the medical component) or in an alternate index designated by the Secretary of Health, Education and Welfare.

2. Evidence must be clear that the providers and the states have cooperatively established effective utilization review and quality control systems.

The new fee regulation also requires states to revise their medicaid plans to include descriptions and details of their payment structures. A state that wishes to revise its payment structure for practitioners' services or change the payments authorized under it may not do so until the proposed changes have been approved by the Secretary of Health, Education and Welfare or his representative.

States that begin their medicaid programs after July 1, 1969, must arrange their payment structures so that fees do not exceed the 75th percentile of customary charges.

HEW estimated the regulation would result in a saving of $65 million in the first year.

Despite a strong protest by the American Hospital Association, HEW discontinued the overhead medicare-

*From the Washington Office, American Medical Association, July 7, 1969.

medicaid percentage allowance paid to hospitals, extended care facilities and other institutional providers. It was two percent for non-profit and one-and-one-half percent for proprietary institutions. The action was effective July 1, 1969.

Another new medicaid regulation requires states to provide periodic health screening, diagnosis, and treatment for all eligible youths under 21 years of age, effective July 1, 1969.

HEW also established a new classification of institution – called intermediate care facility – eligible to receive federal contributions for the care of aged, blind, or disabled recipients or public assistance is covered in another regulation. This should reduce costs of medicaid by allowing states to relocate substantial numbers of welfare recipients who are now in skilled nursing homes in lower costs institutions, HEW said.

Community Health Week
October 19-25, 1969

Doctor Ernest B. Howard, Executive Vice President of the American Medical Association, has announced that the seventh annual observance of Community Health Week will be marked October 19-25, 1969. TB/RD associations are urged by Doctor Howard to participate in this important health education project by joining forces with the local medical society in their community. On-going national theme remains, "Teaming Up for Better Health."

Goals of Community Health Week, established by the House of Delegates of the American Medical Association in 1962, are to focus public attention upon the continuing advances which have been made in medical science and health care, stimulate greater public awareness of the growth, improved quality and increasing availability of health resources and facilities in the community, and pinpoint current local health problems and needs.

Community Health Week has proven to be a beneficial project for all and is a prime example of community cooperation in the health field.

CASE OF THE MONTH*

This 61-year-old male patient had a radical perineal prostatectomy recently at another hospital. During his pre-operative studies, a questionable finding was noted on the I.V.P. (Fig. 1). He was transferred to this hospital for further studies.

On admission the physical examination was unremarkable. His blood pressure was 135/85. Blood studies are as follows:

Urinalysis – protein trace;
Occult blood – negative;
RBC – 3 to 5
WBC – Many
The hemoglobin was 15.8. The hematocrit was 45.
WBC and differential 8,800.
Bands – 1; polys – 70; lymphs – 20; monos – 4.

Nephrotomography (See Fig. 2) and angiography was performed.

DIAGNOSIS: Renal fibrolipomatosis.

This entity denotes the pathologic proliferation of fat in the sinus renalis, replacing renal parenchyma, *destroyed by chronic pyelonephritis.*

The central fat tissue has been stressed only recently by Olsson through a more strict application of body section radiography and a renal angiography. He has convincingly evaluated calyceal and infundibular deformities which have required operative intervention in the past to rule out the *presence of tumor.*

This case, as mentioned in the history, was worked up in another hospital. On the outside I.V.P. (Fig. 1) deformity and distortion of the lower calyx of the left kidney is seen. On the basis of the I.V.P. alone, the possibility of a tumor could not be ruled out. The renal angiogram and, in particular, the nephrotomography (Fig. 2) are diagnostic.

Roentgenographic Criteria

(1) Elongation and arching of the major infundibula. Displacement of the calices pressured by the increased fat producing deformities.

(2) The pyelocalyceal system filled with opaque medium is seen to contrast with the large amount of radio-

Continued on Page 185

*From: The Maine Institute of Continuing Medical Education, the Augusta General Hospital in association with the Veteran's Administration Center, Togus, Maine.
Program Directors: Francis J. O'Connor, M.D., F.A.C.R., Augusta General Hospital and Robert L. Ohler, M.D., Veteran's Administration Center, Togus, Maine.
Editor: Demitrios Nikolaidis, M.D., Radiology Department, Augusta General Hospital, Augusta, Maine.



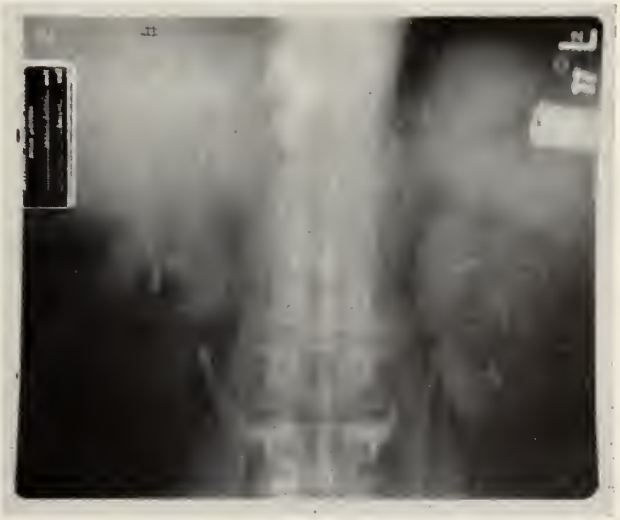


Fig. 1. On this 10-minute film of the I.V.P. the distortion of the left collecting system, in particular at the lower pole and in relation to the lower calyx, is noted.

Fig. 2. Nephrotomogram. Note the large zones of decreased density (radiance) following the pyelocalyceal system representing the fat tissue. While these changes are seen bilaterally the compression and deformity of the left lower calyceal system is obvious.

Maine Medical Association

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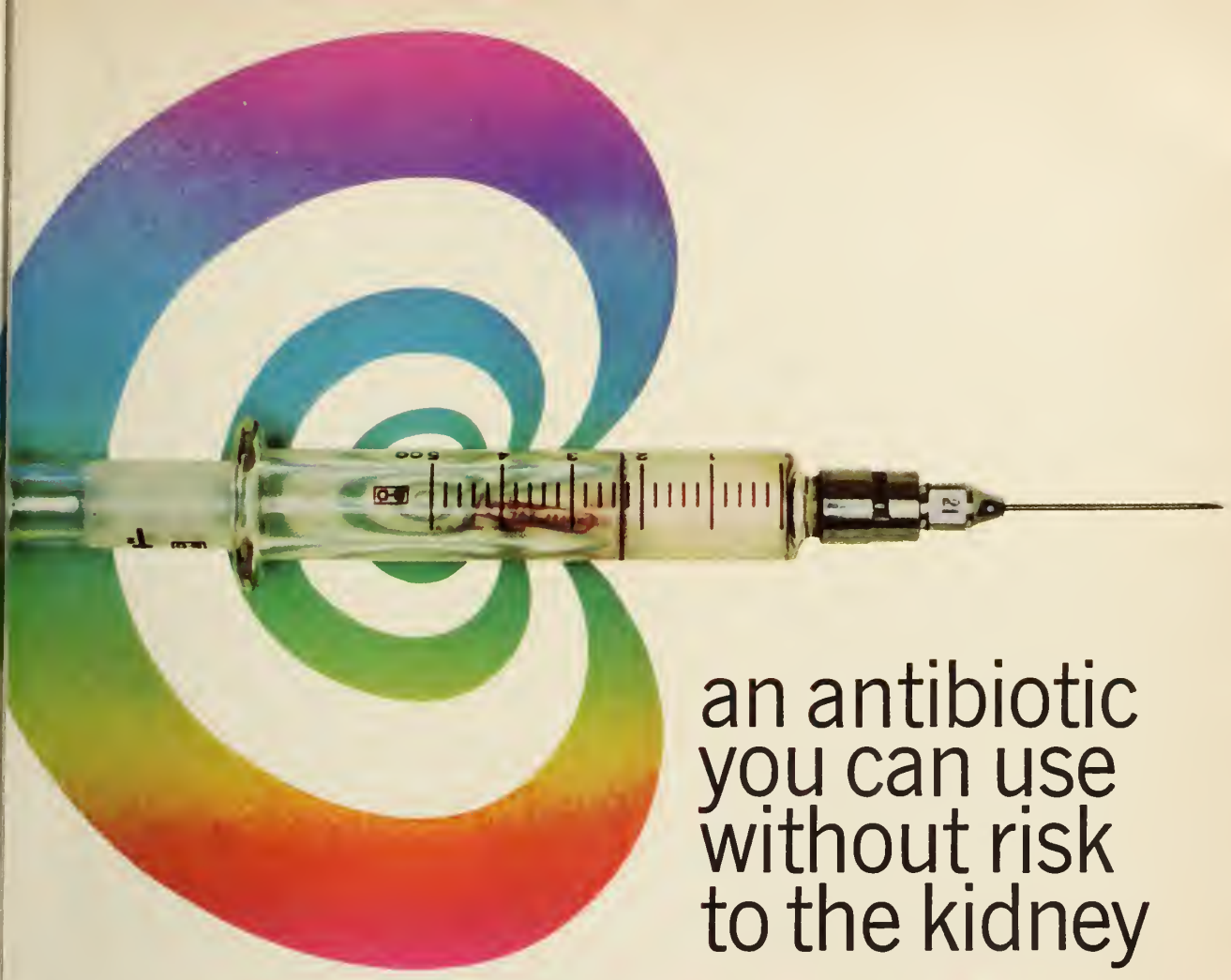
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Continued on Page 185



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simple Ten-day treatment with Flagyl oral tablets has replaced a multitude of untidy douches, powders, creams and jellies.

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lasting Flagyl eradicates resistant, deep-seated invasions of *Trichomonas vaginalis* and consistently produces cure rates above 90 per cent and often as high as 100 per cent in large series of patients. When the diagnosis is positive, Flagyl is positive.

ness," urticaria, flushing, dryness of the mouth, vagina or vulva, vaginal burning, pruritus, dysuria, cystitis, a sense of pelvic pressure, dyspareunia, fever, polyuria, incontinence, decrease of libido, nasal congestion, proctitis, pyuria and darkened urine have occurred in patients receiving the drug. Patients receiving Flagyl may experience abdominal distress, nausea, vomiting or headache if alcoholic beverages are consumed. The taste of alcoholic beverages may also be modified.

Dosage and Administration: In the Female. One 250-mg tablet orally three times daily for ten days. Courses may be repeated if required in especially stubborn cases; in such patients an interval of four to six weeks between courses and total and differential leukocyte counts before, during and after treatment are recommended. Vaginal inserts of 500 mg are available for use, particularly in stubborn cases. *When the vaginal inserts are used,* one 500-mg. insert is placed high in the vaginal vault each day for ten days and the *oral dosage is reduced to two 250-mg. tablets daily during the ten-day course of treatment.* Do not use the vaginal inserts as the *sole* form of therapy. *In the Male.* Prescribe Flagyl only when trichomonads are demonstrated in the urogenital tract, one 250-mg. tablet two times daily for ten days. Flagyl should be taken by both partners over the same ten-day period when it is prescribed for the male in conjunction with the treatment of his female partner.

Dosage Forms: Oral tablets . . . . . 250 mg.
Vaginal Inserts . . . 500 mg.

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Delegate and Alternate Delegate to AMA

(January 1, 1969 to January 1, 1971)

Delegate – George W. Wood, III, M.D., 156 No. Main St., Brewer
Alternate Delegate – Richard P. Laney, M.D., 50 Water St., Skowhegan

CASE OF THE MONTH — *Continued from Page* 183

lucency around it producing negative contrast due to the presence of fatty tissue (See Fig. 2).

(3) On the renal arteriography at the arterial face, atrophy of the smaller ramifications of the arterial tree may be seen. Increased distance between the arterial branches may be present. The absence of abnormal tumor vascularity or tumor staining is helpful in ruling out a malignant growth.

(4) The nephrotomogram brings out the full contrast between the parenchyma and the sinus fat surrounding the pyelocalyceal system.

Summary

This case is presented primarily to stress the value of angiography, and in particular, of nephrotomography in cases where distortion of the pyelocalyceal system is noted on the routine I.V.P. It is only on the basis of the described changes noted on these examinations that unnecessary explorations and even nephrectomies can be avoided.

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Maine Heart Association Notes

20 Winter Street, Augusta, Maine

Current Concepts
The Use of Heparin

Although Heparin is a widely accepted drug, there remains much confusion over its mode of action and over preferred routes of administration, dosage and regulation of therapy.

. . . Because of its strong electrostatic charge, Heparin combines with a wide variety of proteins. Its anticoagulant action is a direct result of this property. . . .

The exact routes of elimination of exogenously administered Heparin are not precisely known. Approximately 20 percent can be recovered in the urine, and the remainder is apparently degraded in the liver. . . .

There are significant differences between Heparin and the coumarin congeners. Heparin is a direct anticoagulant. . . . it is immediately effective in vitro as well as in vivo. . . .

The rationale for the use of Heparin derives exclusively from its ability to block the coagulation mechanism. . . . anticoagulant therapy in general, and Heparin specifically, will be effective in preventing stasis thrombi and disseminated intravascular coagulation, but will have limited effect in preventing the platelet nidus that triggers arterial thrombosis. Accordingly, the most uniformly accepted indications for Heparin therapy are deep thrombophlebitis, acute pulmonary embolism and disseminated intravascular coagulation. Heparin also is frequently used in the management of acute arterial occlusion of the extremities to prevent distal propagation of stasis thrombus before operation. . . .

Heparin therapy is prophylactic. There is no convincing evidence that Heparin has any effect on preformed thrombi except to prevent distal propagation and to limit thrombin-mediated platelet accretion on the surface of the thrombus. . . . The demonstrated efficacy of Heparin in pulmonary embolic disease is due to prevention of further thrombus formation, while lysis of the embolus and organization of the seeding thrombus are in process.

. . . At high concentrations it blocks thrombin-mediated release of pharmacologically active amines from platelets. It may thereby diminish the bronchospasm and dyspnea that accompany pulmonary embolism.

Heparin must be administered parenterally. . . . intramuscular injections should be avoided. Heparin is usually given subcutaneously or by intermittent intravenous infusion. The advantages of the intravenous route are the immediate onset of action, the ease of controlling the dose and the rapidity of dissipation of the anticoagulant effect after the drug is discontinued. . . . some investigators believe that the dramatic interference with the coagulation mechanism that immediately follows the intravenous injection may be the major therapeutic action of Heparin. . . .

There is no uniformity of opinion concerning the optimal dose of Heparin, the frequency of administration or the method of regulating the dose. . . .

Although several experimental models have been offered to substantiate one or another regimen, enthusiasm for a given scheme is largely anecdotal, for no clinical data available establish the superiority of any schedule or even the route of administration. . . . The major objections to adjusting the dose of Heparin in response to frequent determinations of the whole-blood clotting time are the imprecision of the assay as it is usually performed and the excessive time required to perform the test. Several clinics have reported that the activated partial thromboplastin time . . . can be successfully employed to monitor Heparin therapy. If the assay is more widely adopted, more uniform dose schedules may yet emerge.

More frequent bleeding occurs during Heparin therapy than with the oral agents. . . . . . more frequent bleeding follows sustained intravenous administration of high doses every four hours than lower dose schedules. The specific antidote to Heparin is Protamine, . . .

In many cases bleeding . . . heralds a previously unsuspected lesion, but too frequently bleeding reflects errors in management. A deep intramuscular injection of some other medication may cause profound bleeding . . . even if the injection occurred several days before the initiation of Heparin therapy. Furthermore, agents that interfere with platelet aggregation reactions, which are the primary hemostatic defense in heparinized patients, may induce bleeding. Acetylsalicylic acid is such an agent; . . .

Heparin is a potent drug. . . . Given judiciously, it remains the most effective antithrombotic agent available.

Submitted by Jacob B. Dana, M.D., President, Maine Heart Association.

Reference: Deykin, Daniel, The New England Journal of Medicine, Vol. 280, pages 937-938, April 24, 1969.

President

Maine Medical Association

1969-1970



CHARLES F. BRANCH, M.D.

Charles F. Branch, M.D. of Auburn, Maine assumed his duties as President of the Maine Medical Association at the 116th Annual Session banquet on June 16, 1969. Dr. Branch served as Councilor for the Second District from 1963 to 1969; the last year as Council Chairman and as President-elect from 1968 to 1969.

Dr. Branch was born in Amherst, Massachusetts on August 14, 1897, son of Charles Franklin and Clara Greenwood Branch. He was graduated from St. Johnsbury Academy in Vermont in 1917, received his medical degree from the University of Vermont College of Medicine in 1923 and served a residency in pathology at the Boston City Hospital from 1923 to 1925.

Dr. Branch taught at Jefferson Medical College in Philadelphia from 1925 to 1926 and at Boston University from 1926 to 1946. He was professor of pathology at Boston University from 1932 to 1946, dean of the medical school from 1943 to 1946 and was associate director of Evans Memorial for Clinical Research from 1939 to 1944. He was licensed as a specialist by the American Board of Pathologists in 1937. From 1946 to 1947, he was executive director of the Children's Medical Center in Boston and from 1947 to 1950 assistant director of the American College of Surgeons. In 1950, Dr. Branch was appointed director of Laboratories and Pathologist-in-Chief at the Central Maine General Hospital. He has served as Consulting Pathologist at the Rumford Hospital, Franklin County Memorial Hospital, Goodall Hospital and Stephens Memorial Hospital and as medical examiner for Androscoggin County. He is also one of the founders of the Maine Pathological Society and the Maine Medico-Legal Society of which he was president from 1961 to 1963.

Dr. Branch was appointed Maine's first Chief Medical Examiner in May 1968. This position was created by the legislature in special session in January 1968 to give the state some central direction and supervision in the medical-legal aspects of homicides and unattended or unexplained deaths.

Dr. Branch is a member of the American Medical Association, the Maine Medical Association, the Androscoggin County Medical Association, the Massachusetts Medical Society, the American Association of Pathology and Bacteriology, the American Society of Clinical Pathology, the New England Cancer Society, the USPHS Cancer Society, American Association of Cancer Research, the International Academy of Pathology, the New England Pathological Society, the Chicago Pathological Society and the College of American Pathologists.

Dr. Branch is married to the former Mary Chapman and they have two sons, Christopher and Nicholas.

Elected at the 116th Annual Session of the Maine Medical Association

Rockland, Maine June 15, 16, 17, 1969

President-Elect
CHARLES R. GLASSMIRE, M.D., Portland

Councilor, First District
ROBERT F. FICKER, M.D., Kennebunkport

Councilor, Second District
CHARLES W. EASTMAN, M.D., Livermore Falls

Council Chairman
LINUS J. STITHAM, M.D., Dover-Foxcroft



DR. GLASSMIRE



DR. STITHAM



DR. FICKER

AMERICAN CANCER SOCIETY - MAINE DIVISION, INC.

Brunswick, Maine

Vote Against Health Warning in Cigarette Advertising

NEW YORK, N. Y. — The following statement was issued recently by the American Cancer Society:

"The American Cancer Society is disappointed at the action of the House of Representatives in voting to prevent for the next six years the Federal Trade Commission from requiring a health warning in cigarette advertising. In these six years, if current mortality rates continue, some 300,000 men and women will die of lung cancer; in about 225,000, of these the lung cancer will be caused by cigarette smoking. This is a terribly high price to pay to a disease which can in most cases be prevented by avoiding the chief cause — cigarette smoking.

"The sole interest of the American Cancer Society in this legislation is public health, and especially protection against cancer. Clearly, cigarette advertising influences young people to take up a habit which the Surgeon General and every medical and scientific agency which has considered this problem considers a serious health hazard. To prevent the government's health and regulatory agencies from acting in the public interest for a period of six years is unconscionable.

"We are hopeful that in its consideration of this grave issue the Senate of the United States will weigh the medical and scientific evidence and act to protect the health of the American people."

American Cancer Society News Service Release

Necrologies

Forrest B. Ames, M.D.

1891-1969



Forrest B. Ames, M.D., 78, of Brewer, Maine, a Past President of the Maine Medical Association, died on June 9, 1969. He was born on May 16, 1891, son of Charles H. and Mary G. Ames.

Dr. Ames was graduated from Bangor High School in 1909, the University of Maine in 1913 and received his medical degree from Harvard Medical School in 1919. He interned at the Boston City Hospital from 1919 to 1921 and was in the Department of Radiology at the Boston City Hospital from 1921 to 1923, when he moved to Bangor. He organized the Department of Radiology at the Eastern Maine General Hospital and was Radiologist at St. Joseph Hospital in Bangor.

He was an honorary member of the Maine Medical Association and the Penobscot County Medical Association and would have received a fifty-year honorary pin at the 1969 annual session of the Maine Medical Association in June. Dr. Ames was also a member of the American Medical Association and a Fellow of the American College of Radiology. He had served as Secretary-Treasurer of the Penobscot County Medical Association from 1939 to 1946.

Surviving are his wife, Madolyn M. Ames of Brewer; three daughters, Mrs. Janice Hawkins of Hillsborough, New Hampshire, Mrs. Marilyn Sawyer of Newton, New Hampshire and Mrs. Priscilla Pike of Storrs, Connecticut; a stepdaughter, Mrs. Barbara M. Kimball of Brewer; a sister, Miss Maybelle Ames of Bangor; a brother, LeRoy Ames of Bangor; thirteen grandchildren and a nephew.

Hudson R. Miller, M.D.

1891-1969

It was with deep regret that the members of the Androscoggin County Medical Association learned of the passing of Dr. Hudson R. Miller, whose death occurred April 13, 1969. Dr. Miller had been a member of this Association for fifty-five years. He was born in Lewiston, Maine, July 14, 1891.

After graduating from Lewiston High School, he entered Bowdoin Medical School and received his medical degree in 1914. Dr. Miller served as intern at the Central Maine General Hospital during 1914 and 1915. From January 1917 to March 1918, he served his residency at Bellevue Hospital, New York City. He did work on the Ophthalmic Service at the New York Eye and Ear Infirmary in 1918 and 1919.

Dr. Miller served with the Army Medical Corps in World War I. During this time, he was stationed in hospitals in England. He retired from this service with the rank of Captain. Following his military service, Dr. Miller opened his office in Auburn in 1919, limiting his practice to eye, ear, nose and throat. He practiced in Auburn for 55 years until a few weeks before his death.

Dr. Miller officially joined the staff of the Central Maine General Hospital as adjunct ophthalmic surgeon in 1919. In 1923, he was appointed as ophthalmic surgeon, which position he held from 1923 to 1953. He has been, since then, consulting surgeon until his death in 1969.

Dr. Miller enjoyed a large and very active practice for many years. His early service was before the days of antibiotics and his surgical service was extremely busy with mastoid operations. Infected mastoids were very common, and with the tonsillectomies, he was very active. He took graduate work at the Massachusetts Eye and Ear in 1936-1938.

Dr. Miller was a member of the American Medical Association, the Androscoggin County Medical Association and the Maine Medical Association. He received a 50-year pin from the Maine Medical Association in 1964, and would have received his 55-year pin at the 1969 annual session in June.

Dr. Miller was active in community affairs. He was a past member of Rotary International, a life member of Kora Temple of the Mystic Shrine. He was a corporative of the Auburn Savings Bank.

Although interested in many sport events, Dr. Miller's one source of diversion was to travel. He frequently took trips to Florida, and a few years ago with a colleague, Dr. Brien, engaged in an extensive tour of Europe. Later he traveled to the Hawaiian Islands.

Dr. Miller was highly respected by his colleagues for his professional ability and judgment. He leaves a large number of sincere friends in these communities and he will be greatly missed.

Eustache N. Giguere, M.D.
Waldo A. Clapp, M.D.
Ralph A. Goodwin, M.D.

Tadeo Zbyszycki, M.D.

1916-1969

Tadeo Zbyszycki, M.D., 52, of Skowhegan, Maine died on May 11, 1969. He was born in Vienna, Austria on May 21, 1916, son of Tadeo and Anna Hajek Zbyszycki.

Dr. Zbyszycki received his education in Poland and Austria and his medical degree from the University of Innsbruck, Austria in 1946. He interned at the Knickerbocker Hospital in New York City from 1959 to 1960 and took postgraduate courses at the New Jersey State Hospital from 1961 to 1963, and the Bangor State Hospital from 1963 to 1964. In 1964, he located in Skowhegan where he was a staff member at the Fairview and Redington Memorial Hospitals.

Dr. Zbyszycki was a member of the Maine Medical Association and the Somerset County Medical Society.

He is survived by two sons, Cadeus Stefan and Victor Tadeo; two daughters, Eva and Maria, all of Skowhegan, and a half sister of Minnesota.

Kurt A. Sommerfeld, M.D.

1903-1969

Kurt A. Sommerfeld, M.D., 65, of Gardiner, Maine died on May 12, 1969. He was born in Schneidemuehl, Germany on December 1, 1903, son of Siegfried and Betty Sommerfeld.

Dr. Sommerfeld received his education in Heidelberg, Freiburg and Berlin, Germany and received his medical degree from the University of Berlin Medical School in 1929. He served his internship in Berlin, Germany and Lewiston, Maine. In 1941, he began his medical practice in Gardiner, where he remained until his retirement in 1960. For the past eight years, Dr. Sommerfeld had been a member of the medical staff at the Veterans Administration Center in Togus.

Dr. Sommerfeld was a member of the Maine Medical Association and the Kennebec County Medical Association.

Surviving are his wife, Lottie Sommerfeld of Gardiner and several nieces, nephews and cousins.

Edward G. Asherman, M.D.

1913-1969

Edward G. Asherman, M.D., 55, of Falmouth, Maine died on May 23, 1969. He was born in New York City on September 7, 1913, son of Edward H. and Gladys Goodwin Asherman.

Dr. Asherman was graduated from Yale University in 1935 and received his medical degree from McGill University Faculty of Medicine in 1940. He interned at the Maine General Hospital in Portland from 1940 to 1941 and served residencies at the Knickerbocker Hospital in New York City from 1945 to 1946, and the New York Orthopedic Hospital from 1946 to 1948. Dr. Asherman located in Portland in 1949.

He was a member of the American Medical Association, the Maine Medical Association, the Cumberland County Medical Society, the medical staff at Mercy Hospital and a member and past secretary of the medical staff of the Maine Medical Center. Dr. Asherman was chairman of the Medical Legal Liaison Committee of the Cumberland County Medical Society and the Maine Medical Association, a diplomate of the American Board of Orthopedic Surgery, a Fellow of the American Academy of Orthopedic Surgeons and the American College of Surgeons, a former member of the Portland Rotary Club and served many years as a consultant at the Hyde Home for Crippled Children. He was the professional advisor to the Pine Tree Society for Crippled Children and Adults and served in many civic organizations.

Surviving are a daughter, Miss Joanne G. Asherman of Falmouth; a son, Edward G. Asherman, Jr. of Falmouth; three brothers, David G. of Honolulu, Aldon M. of Peekskill, New York and Adrian L. of Waterville and several nieces and nephews.

Joseph R. Larochelle, M.D.

1881-1969

Joseph R. Larochelle, M.D., 88, of Biddeford, Maine died on May 26, 1969. He was born in St. Arsene, Canada on March 14, 1881, son of Herode and Claire Jean Larochelle.

Dr. Larochelle was graduated from St. Anne De La Pocatiere College in 1903 and received his medical degree from Laval University Faculty of Medicine in Quebec in 1907. He did postgraduate work at Harvard University in 1907. Dr. Larochelle located in Biddeford, where he had practiced medicine since 1907.

He was an honorary member of the Maine Medical Association and the York County Medical Society, having received a fifty-year pin in 1957, a fifty-five year pin in 1962 and a sixty-year pin in 1967. Dr. Larochelle was also a member of the American Medical Association, an honorary member of the staffs of Notre Dame Hospital and Webber Hospital, and was a former chief of obstetrics at the Webber Hospital.

Surviving are a son, Dr. John R. Larochelle of Saco; a sister, Mrs. Blanche Labrecque of Manchester, New Hampshire; three grandsons of Saco and two granddaughters of Montreal.

Ernst Eppinger, M.D.

1908-1969

Ernst Eppinger, M.D., 61, of Portland, Maine died on May 26, 1969. He was born in Vienna, Austria on March 18, 1908.

Dr. Eppinger was graduated from the University of Vienna School of Medicine in 1938. He interned at the Manchester Memorial Hospital from 1942 to 1944 and served a residency at the Mt. Sinai Hospital in Hartford from 1944 to 1946. He practiced medicine in Buxton from 1948 to 1952, when he located in Portland.

He was a member of the Maine Medical Association, the Cumberland County Medical Society, the American Academy of General Practitioners and was affiliated with the Mercy Hospital and the Maine Medical Center.

Surviving are his wife, Ite Eppinger; a son, Dan Eppinger of New Fairfield, Connecticut; a granddaughter and several cousins.

County Society Notes

CUMBERLAND

Sixty-five members were present at the meeting of the Cumberland County Medical Society which was held at the Holiday Inn in Portland, Maine on May 15, 1969. Following a social hour and dinner, the meeting was called to order by the President, George F. Sager, M.D.

OLD BUSINESS – Committee reports were heard.

A. Standing Committee reports.

1. *Public Relations.* James H. Bonney, M.D. reported that the Public Relations Committee had been able to handle all of its inquires without any difficulties.

2. *The Auxuliary Committee on Legislation.* Howard P. Sawyer, Jr., M.D., supported by Domenico A. Santoro, M.D. reported that the Abortion Bill had been defeated. The Chiropractor Bill had been defeated and a lengthy discussion followed on a Bill to extend the limits of liability. It was pointed out to the membership that the Bill before the Legislature would extend the period of liability from two years after the inception of the accident to two years after the discovery of the alleged malpractice incident. Robinson L. Bidwell, M.D. later commented that he felt this Bill had some merit and that it deserved special attention and thought from each member of the Society.

B. Ad Hoc Committee reports.

1. *Program Committee.* Philip G. Whitney, M.D. requested any suggestions for information regarding interesting speakers or guests for future programs.

2. *Utilization Committee for Extended Care Facilities.* Reported by Dr. Briggs. A discussion followed regarding the extent of the Extended Care Facilities Utilization Committee and whether it was a local Portland organization or a Cumberland County organization. The conditions under which patients become available for Extended Care Facilities were mentioned including that the condition must require skilled nursing care on a continuing basis. The care must be an extension of the inpatient care except that the Dr. does not have to visit daily, that custodial care does not require skilled nursing care. Some procedures mentioned as requiring skilled nursing care were IV's, Naso-esophygeal aspirations, ileostomy or colostomy care in the immediate stage, catheters other than in the bladder, and extensive decubitus care.

3. *Medical Careers Committee.* Robert E. McAfee, M.D. had no report.

4. *Diabetes Detection Clinic.* It was reported that because of the continuing State involvement in an ever enlarging Diabetes Program, the Cumberland County Diabetes Program might in another year be dissolved.

5. *Medical-Legal Liaison Committee.* Report was given by Dr. Bidwell. He noted that with the increased intrusion of medical-legal matters on practice of medicine and with the changing concepts of malpractice, the Medical-Legal Liaison Committee could expect to become busier and busier. In fact, Dr. Bidwell suggested that this Committee become a Standing Committee.

6. *Representative to State Health Insurance Committee.* A report was given by Albert Aranson, M.D. He suggested that the freeze on Medicare fees may soon be dissolved. That Medicaid may adopt the low level Medicare fees instead of the usual and customary fees.

7. *Committee on the City Health Physician Dilemma.* A plan had been presented to the City Manager and that more meetings were planned in the future to bring about some resolution to this problem.

8. *Bylaws Committee.* It was reported, through Robert H. Pawle, M.D., that the study of the Bylaws continues.

9. *Representative to the Southern Maine Comprehensive Health Association.* Douglass C. Pennoyer, M.D. reported that in the past few months organizational procedures by the Director, Stanley Hanscom, had proceeded. Mr. Philip Reiman had been named the President of the Board of Trustees of the Southern Maine Comprehensive Health Association. There were three medical people on the Board, Drs. Hanley, Paul Hill, Douglass Pennoyer. Two Osteopaths, a nurse, and a dentist were representing the medical field also. It was pointed out by Dr. Davy that the Comprehensive Health Association is an organization to gather factual material to correlate data and to plan programs as distinct from the Regional Medical Program which is a specific program under the Heart-Cancer-Stroke Program for improving patient care, teaching and training those associated with patient care, and carrying out specific projects.

NEW BUSINESS.

John N. Burke, M.D. was voted into membership in the Cumberland County Medical Society by transfer from the Burlington County Medical Society, Burlington, New Jersey.

The resolution to be presented to the Maine Medical Association at the June meeting by the Lincoln-Sagadahoc County Medical Society regarding the solicitation and commercial advertising of Medical Specialties by lay corporations in AMA publications was discussed. It was voted that the Delegates from the Cumberland County Medical Society go to Rockland uninstructed with regard to this resolution.

Discussion of the dues structure was briefly mentioned by Dr. Sager. It was suggested by the Society that the matter be given special planning and attention by the Executive Committee and that the Secretary-Treasurer's stipend be reviewed.

DOUGLAS R. HILL, M.D., *Secretary*

WASHINGTON

The regular meeting of the Washington County Medical Society was held on May 26, 1969 at the Dennys River Inn, Dennysville, Maine with seven members present.

The first item of business was a discussion of what might be considered the necessary personnel required by Medicare in Labor and Delivery rooms. No definitive action.

The second item was the discussion of the Maternal and Infant Care Plan and a forthcoming meeting with Dr. Tompkins of Washington, D.C. Various members discussed cases they had had under the MIC Plan. Some felt that the cases had been benefited, but the plan as set up is far from being entirely to the satisfaction of the doctors present. They were hoping that with Dr. Tompkins' cooperation many of the points in question would be cleared.

There was also some discussion to the legislative document 1047 which would extend Blue Cross, Blue Shield benefits. Members took no action on this.

KARL V. LARSON, M.D., *Secretary*

YORK

A business meeting of the York County Medical Society was held at the York Hospital in York, Maine on June 11, 1969, following a social hour and dinner.

The guest speaker was Lt. Cdr. C. J. Wise, USN Medical Corps, U.S. Naval Hospital, of Kittery, Maine. Lt. Cdr. Wise gave a very interesting illustrated talk on Haiti. Many significant color slides were shown which included views of the countryside, urban areas and the local hospital.

Mr. King Bishop, Administrator of the Devonshire Nursing Home in Portland, Maine and The Pine Point Manor in Scarborough, Maine discussed pertinent information regarding Medicare. Problems and requirements were reviewed.

Robert F. Ficker, M.D. of Kennebunkport was nominated as

Councilor for the First District of the Maine Medical Association; election of a Councilor for this District will take place at the annual meeting in June.

After some discussion, Leopold A. Viger, M.D. was directed to appoint a committee to investigate and assist in the nursing home problems as it involves York County.

Charles R. Glassmire, M.D. discussed MEMPAC and AMPAC and its impact on medicine and the A.M.A. He stated that the annual dues is $20.00 for membership in MEMPAC. He also urged all to join. All interested should contact Mrs. Thomas Anton of Old Orchard Beach, Maine, Secretary for this group, concerning membership.

Paul S. Hill, Jr., M.D., Past President of the Maine Medical Association, talked briefly concerning matters relating to the State Association.

Mr. Keith Brewster, Administrator of York Hospital, served as host.

CHARLES W. KINGHORN, M.D., *Secretary*

News, Notes and Announcements

State of Maine Board of Registration of Medicine Secretary — George E. Sullivan, M.D. Waterville, Maine

Physicians Licensed to Practice Medicine and Surgery in the State of Maine — 1969

Through Reciprocity

David L. Adams, M.D., 19 Forest St., So. Burlington, Vt.
John A. Boothby, M.D., 331 Veranda St., Portland, Me.
Stephen B. Dewing, M.D., Box 311, Morgantown, W. Va.
John T. Dinan, Jr., M.D., 17127 Muirland, Detroit, Mich.
David C. Dixon, M.D., 22 Bramhall St., Portland, Me.
Elizabeth A. Eilers, M.D., Box 26, Rockport, Me.
Robert S. Furman, M.D., 820 Sumner Ave., Syracuse, N.Y.
William J. Hall, M.D., 86 Rockaway Ave., Marblehead, Mass.
Rufus W. Head, M.D., U.S. Naval Base, Winter Harbor, Me.
Gerald F. Hogan, M.D., 71 N. Pleasant St., Amherst, Mass.
Gareth O. M. Jones, M.D., 60 Hadley Rd., New Barnet, Herts, England
Hugh H. Johnston, Jr., M.D., 275 Sudbury St., Marlboro, Mass.
Yasuo Kanda, M.D., 719 W. Belden, Chicago, Ill.
Zareh Kazandjian, M.D., 55 Emmerson St., Edmundston, N.B.
Philip R. Kimball, M.D., 6 Presque Isle St., Fort Fairfield, Me.
Lewis E. Nolan, M.D., Box 68, Tomah, Wis.
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Kevin D. O'Brien, M.D., 331 Veranda St., Portland, Me.
Raymond E. O'Keefe, M.D., 7230 Wedgewood Dr., Jacksonville, Fla.
Harold C. Patterson, M.D., 93 West St., Danbury, Conn.
Hubert A. Royster, Jr., M.D., Durham, N.C.
Herman G. Sandvoss, M.D., Irvington-on-Hudson, N.Y.
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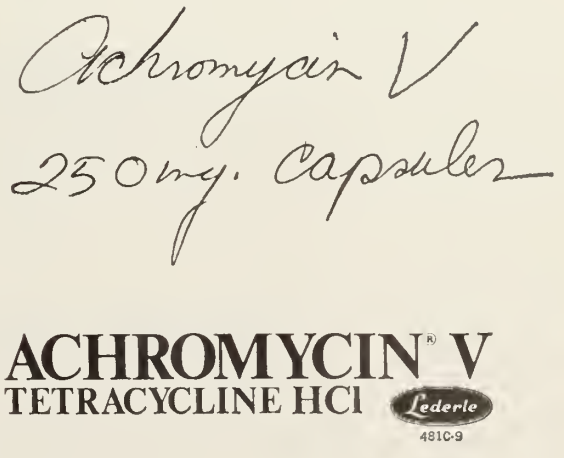
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Applications are now being accepted for the group entering in July or September, *1970.* For information, write to Helen M. Wallace, M.D., School of Public Health, University of California, Berkeley, California 94720.



Letter to the Editor

To the Editor:

Senator Muskie's address MEDICINE AND SOCIETY sounds as if it offers medical men a choice between either providing universal, effective, and economical medical care voluntarily or providing this same medical care directed, authorized, and paid for by the government. His concept of total health care is one of technically defined, bureaucratically administered, welfare state medical care; whether it be provided by doctors voluntarily or by the government. This is not a choice. We might well consider the reason he offers no meaningful alternatives.

Senator Muskie's proposals are those of the technically oriented bureaucrat who sees health care as a product, and the problems of medical care reducible to a monolithic system structured to the mentality of the technological age. By this method, human resources are conceived of, and managed, in the light of that information which is currently known and technically rational. People and their problems become known to the system only in terms of this easily managed technical data. All such measurements and comparisons subordinate qualitative dimensions, natural context, and unique and variable properties to the common, stable, external and reproducible. When thought of in terms of technically reproducible data, people appear to have no assertion of spontaneity, self realization or true freedom. They become "industrious sheep" as described by Tocqueville as the model citizen of that state whose only greatness is its collective power. The riot in Chicago during the convention, the campus riots at Berkeley, Columbia, and hundreds of other schools all erupt over the conflict between technical bureaucracy and individuals seeking and demanding freedom from its controls.

When Senator Muskie says "we have come to view health care as a right," he describes the political philosophy necessary for welfare state medical planning. In the welfare state, the government, not the patient, is responsible for health maintenance, and therefore decides what each individual patient needs, the doctor who is to provide the service, the methods and techniques to be used. This task has exceeded the ability of the government in England where the quality of medical care continues to decline understandably in view of the annual professional abdication of one-third of its medical graduates.

By describing medical care as a right, Senator Muskie indicates that he mistakenly regards health care as a commodity dispensed by physicians to passively receptive patients and that every person is ready and able to receive this commodity. Total health care is not a commodity in that the individual patients actively provide ninety-five percent of their own continuing total health care. The physician's responsibility is overblown when the medical profession is held morally responsible for effective total health care in a population unable and/or willing to properly assume its major portion of the task.

Senator Muskie says the health care system does not work for many citizens. This is true, but the areas of failure enumerated by Senator Muskie are for the most part not the responsibility of the medical profession. His list of health care system failures includes the social and economic conditions in the ghetto of our larger cities, the environmental pollution by industry and the general population, the resistance to family planning, the inflation promoting rising medical care costs, the mal-distribution of foods in the country, the superstition, quackery, and ignorance that prevents the universal application of new knowledge. There are many ills properly ascribed to health care, and we as responsible professionals should be working on them. We will not, however, accept the responsibility for all social and economic ills. Such broad and sweeping criticisms by responsible public officials do not constructively point out the true weaknesses in our health care efforts. A serious concern for health care effectiveness, efficiency and equity does not involve the question of civil rights, but rather civil responsibilities, for both patients and doctors alike.

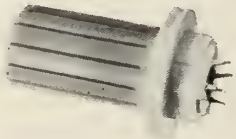
Senator Muskie believes everyone wants to stop environmental pollution. Surely he realizes that the leaders of our industrial military complex appear unconcerned about pollution. Similarly, there is no national unanimity of approach concerning health care. The American public has a great variety of goals to attain with public funds, and consequently shows only a vague interest in large scale health planning. Most government health programs are painfully under-financed, fragmented, and ineffective. It may be helpful if Senator Muskie were to apply his critical attention to this area.

Medical care is not a commodity. Doctors and patients are not reducible to technical data. There is no definable medical care system in the United States. If I were asked what do I think we should do about all this, I would second a motion made by Voltaire who said, "I think we should all cultivate our own gardens."

Very truly yours,
WINSTON G. STEWART, M.D.
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Precautions: Drowsiness, anorexia, slight gastric distress can occur. In excessive drowsiness, consider longer dosage intervals. Persons on full dosage should not operate vehicles. Nonsusceptible organisms may overgrow; treat superinfection appropriately. Treat beta-hemolytic streptococcal infections at least 10 days to help prevent rheumatic fever or acute glomerulonephritis. Tetracycline may form a stable calcium complex in bone-forming tissue and may cause dental staining during tooth development (last half of pregnancy, neonatal period, infancy, early childhood).

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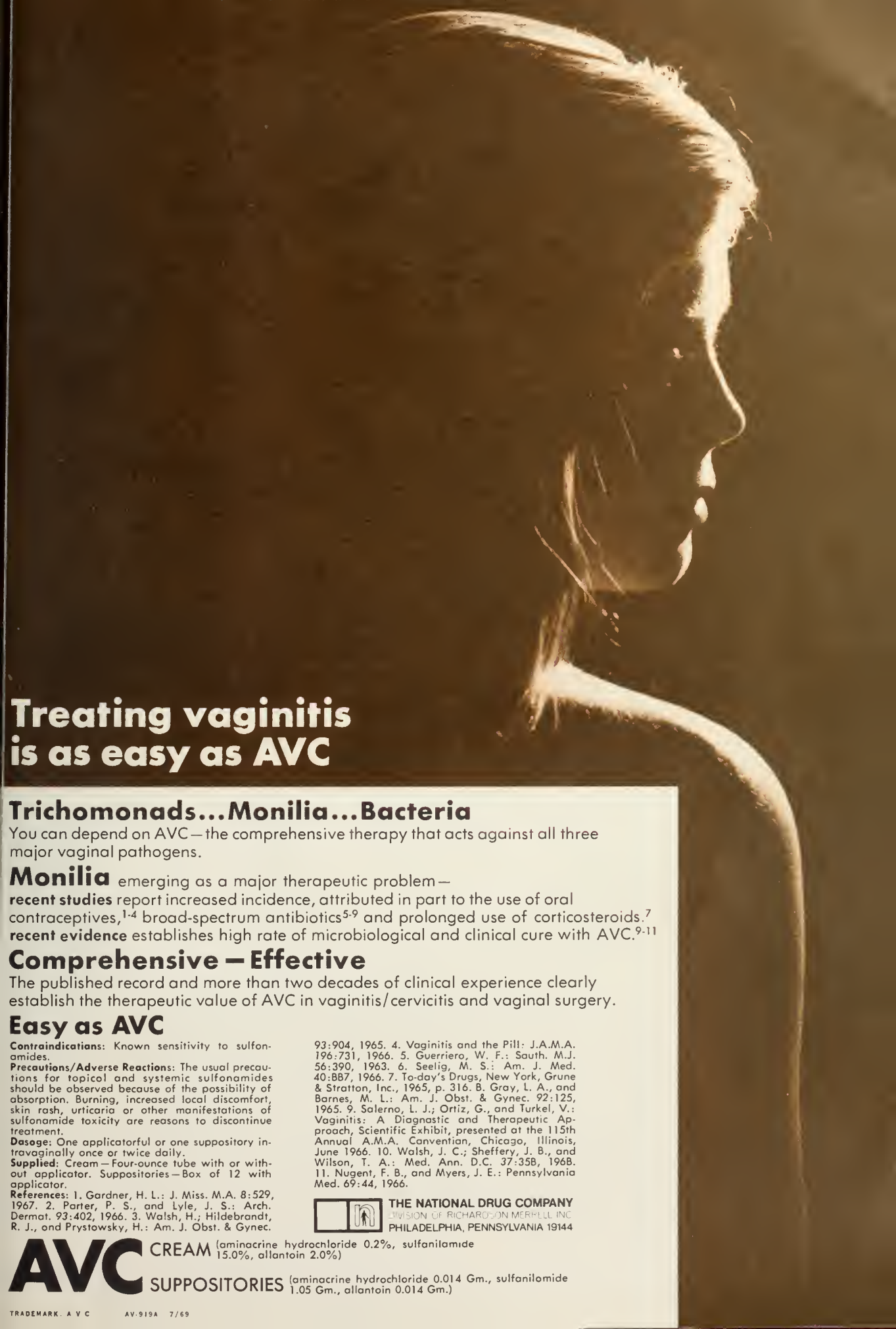
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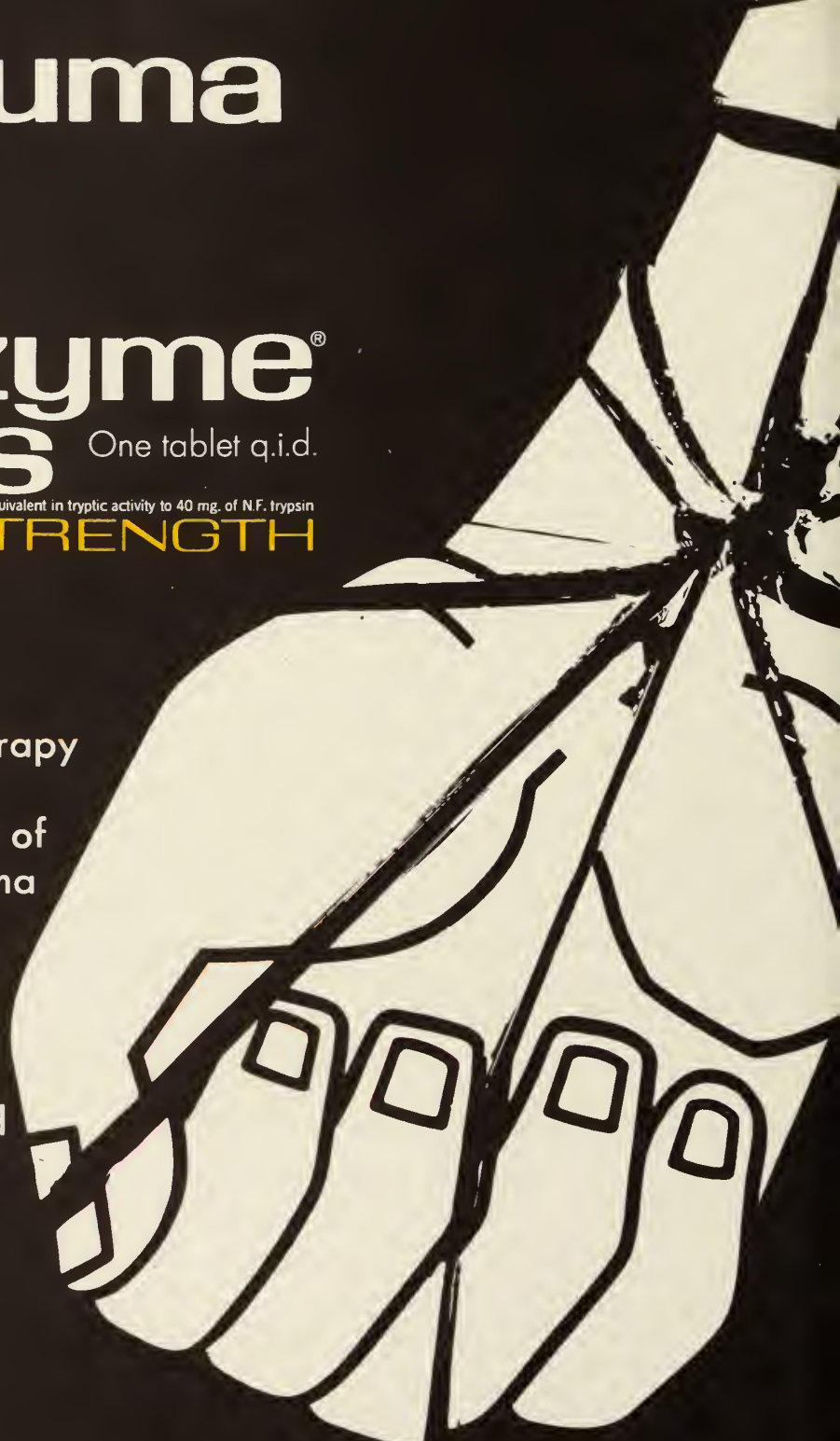
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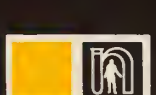
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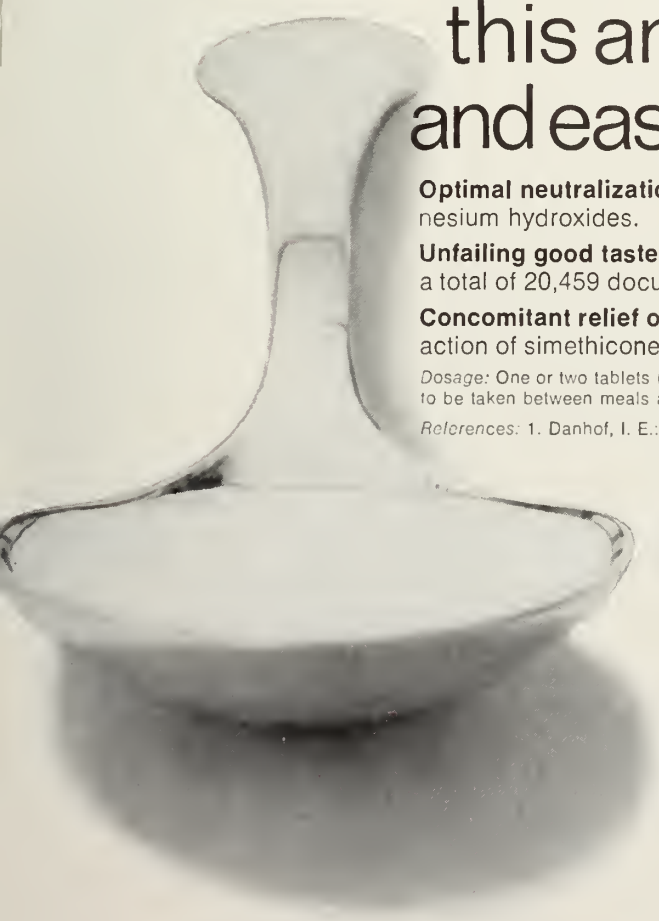
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Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms have occurred following abrupt discontinuance. Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcitec states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation, have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

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Gholamali Mozaffarian, M.D., Portland, Me.

Continued on Page IV





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Adverse Reoctions: Rorely severe enough to require discontinuotion of therapy, unpleosont symptoms with diethylpropion hydrochloride hove been reported to occur in relotively low incidence.

As is chorocteristic of sympathomimetic ogents, it may occosionolly couse CNS effects such as insomnio, nervousness, dizziness, onxiety, and jitteriness. In controst, CNS depression has been reported. In o few epileptics on increose in convulsive episodes has been reported.

Sympothomimetic cordiovosculor effects reported include ones such as tochycordio, precordial poin, orrhythmio, polpitotion, and increosed blood pressure. One published report describes T-wove chonges in the ECG of o heolthy young male ofter ingestion of diethylpropion hydrochloride; this wos an isoloted experience, which hos not been reported by others.

Allergic phenomeno reported include such conditions as rash, urticario, ecchymosis, ond erythema. Gostrointestinol effects such os diorrheo, constipation, nauseo, vomiting, ond obdominol discomfort hove been reported.

Specific reports on the hematopoietic system include two eoch of bone morrow depression, ogronulocytosis, ond leukopenio.

A variety of miscellaneous odverse reoctions hove been reported by physicions. These include complaints such os dry mouth, heodache, dyspneo, menstruol upset, hair loss, muscle pain, decreosed libido, dysurio, and polyuria.

Convenience of two dosoge forms: TEPANIL Ten-tob toblets: One 75 mg. toblet doily, swallowed whole, in midmorning (10 a.m.); TEPANIL: One 25 mg. toblet three times doily, one hour before meols. If desired, on odditionol tablet moy be given in midevening to overcome night hunger. Use in children under 12 yeors of oge is not recommended.

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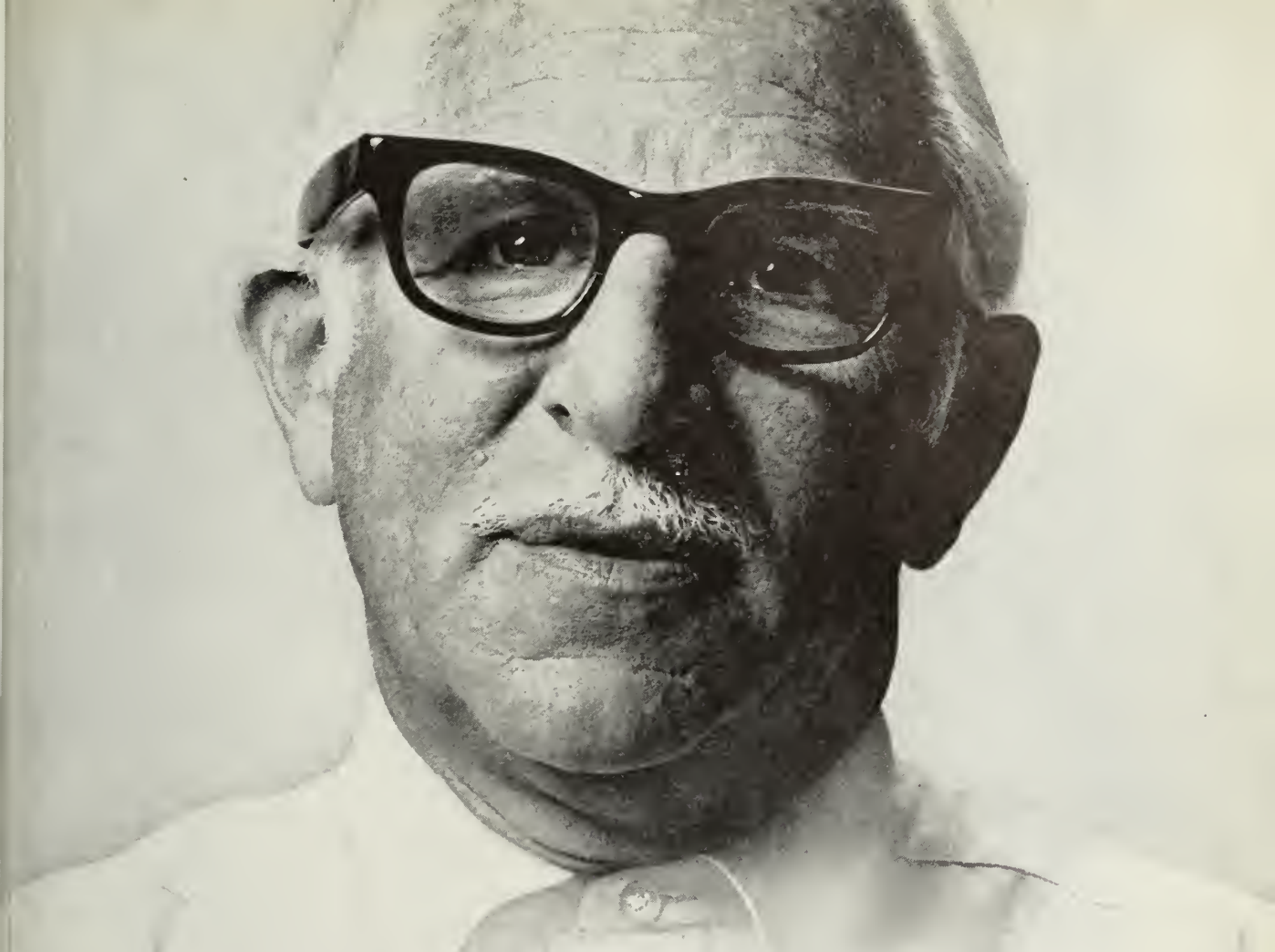
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Warning: In renal impairment, usual doses may lead to excessive accumulation and liver toxicity. Under such conditions, lower than usual doses are indicated, and, if therapy is prolonged, serum level determinations may be advisable. A photodynamic reaction to natural or artificial sunlight has been observed. Small amounts of drug and short exposure may produce an exaggerated sunburn reaction which may range from erythema to severe skin manifestations. In a smaller proportion, photoallergic reactions have been reported. Patients should avoid direct exposure to sunlight and discontinue drug at the first evidence of skin discomfort. Necessary subsequent courses of treatment with tetracyclines should be carefully observed.

Precautions: Overgrowth of nonsusceptible organisms may occur. Constant observation is essential. If new infections appear, appropriate measures should be taken. In infants, increased intracranial pressure with bulging fontanels has been observed. All signs and symptoms have disappeared rapidly upon cessation of treatment.

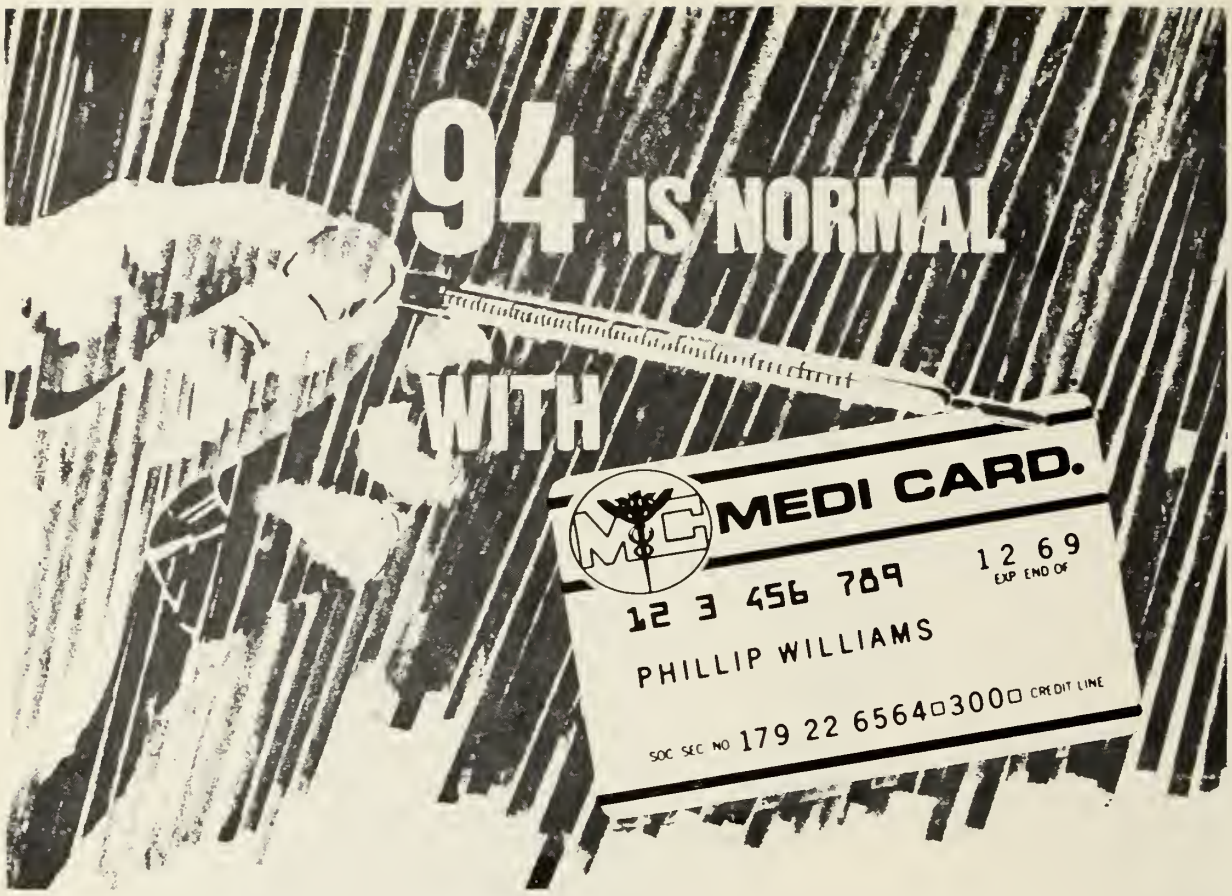
Side Effects: Gastrointestinal system—anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis, pruritus ani. Skin—maculopapular and erythematous rashes; a rare case of exfoliative dermatitis has been reported. Photosensitivity; onycholysis and discoloration of the nails (rare). Kidney—rise in BUN, apparently dose related. Transient increase in urinary output, sometimes accompanied by thirst (rare). Hypersensitivity reactions—urticaria, angioneurotic edema, anaphylaxis. Teeth—dental staining (yellow-brown) in children of mothers given this drug during the latter half of pregnancy, and in children given the drug during the neonatal period, infancy and early childhood. Enamel hypoplasia has been seen in a few children. If adverse reaction or idiosyncrasy occurs, discontinue medication and institute appropriate therapy. Demethylchlortetracycline may form a stable calcium complex in any bone-forming tissue with no serious harmful effects reported thus far in humans.

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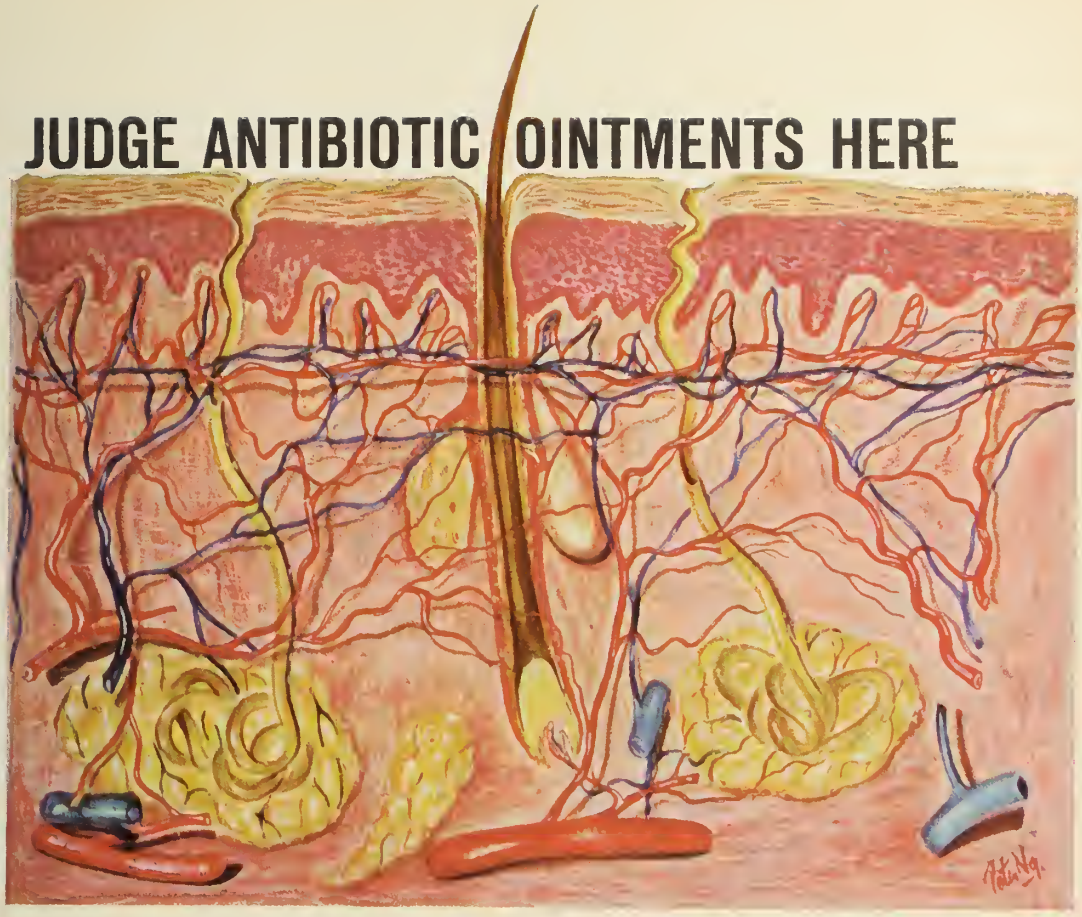
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Symbols in a life of psychic tension

M.A.

class of '66

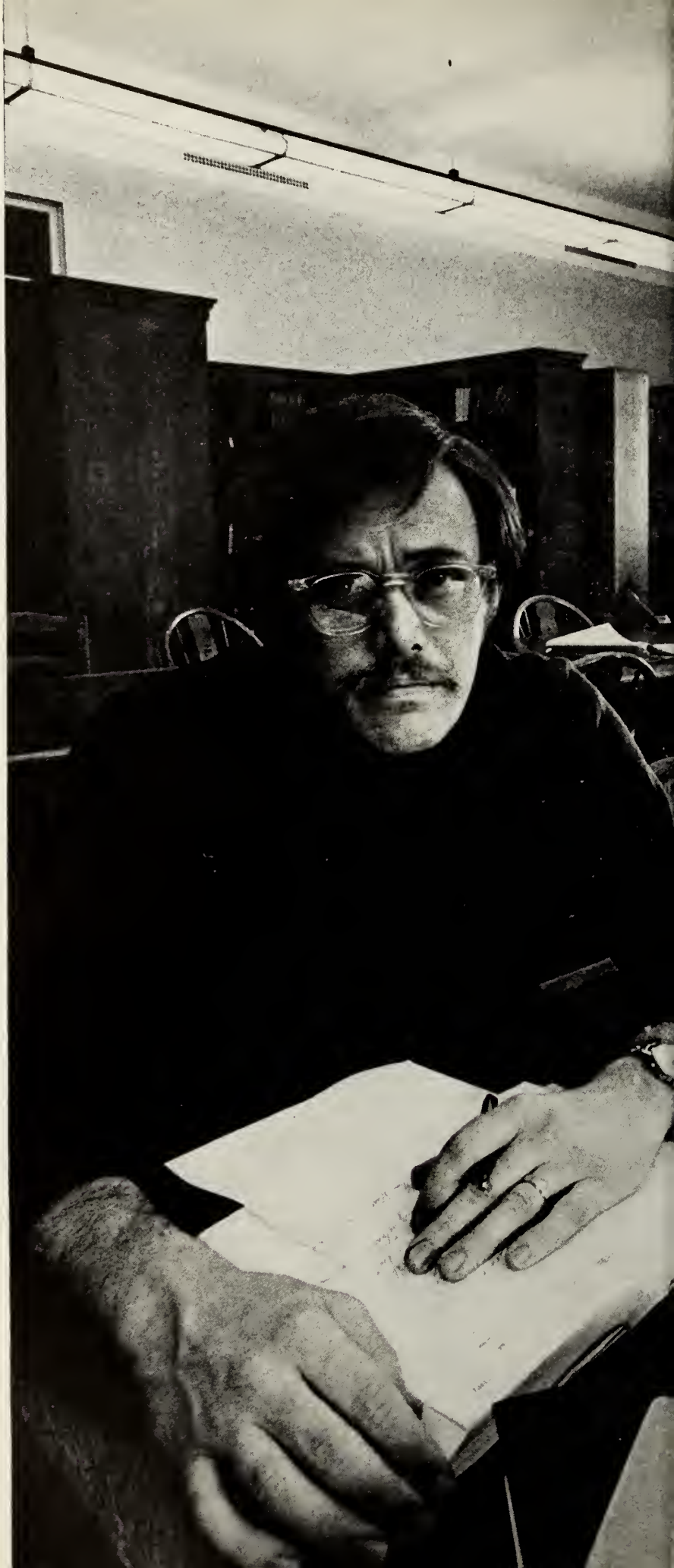
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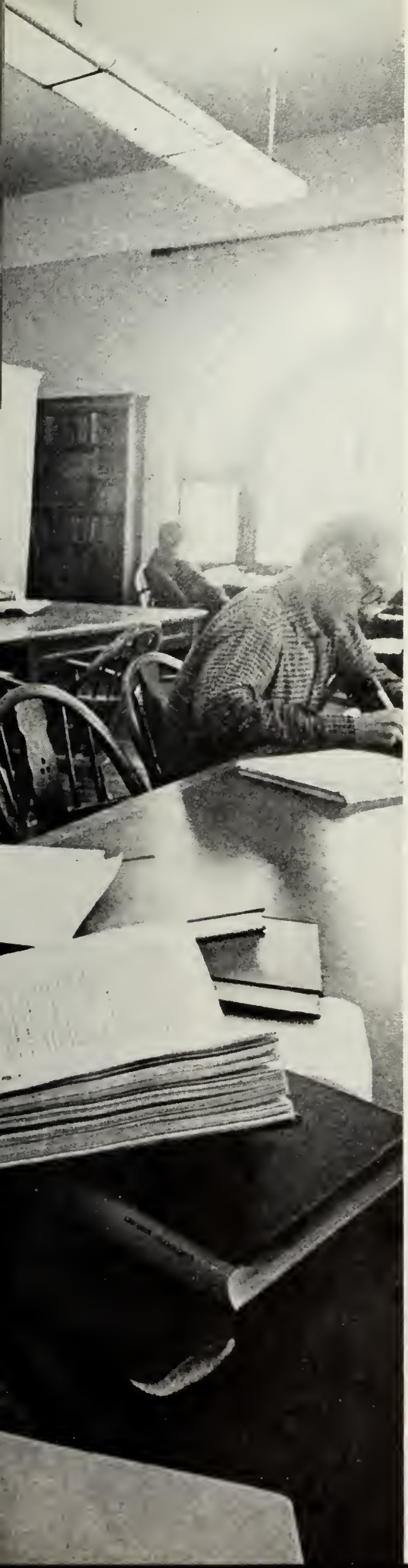
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Valium® (diazepam) *t.i.d.* and *h.s.*

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Valium can help relieve psychic tension and resultant somatic symptoms, within the first day for some patients. Valium is also useful in psychic tension with associated depressive symptoms. And Valium can help relieve psychic tension-induced insomnia with an *h.s.* dose added to the *t.i.d.* schedule.

Valium is generally well tolerated. In proper maintenance dosage it seldom dulls the senses or interferes with functioning. Side effects most commonly reported have been drowsiness, fatigue and ataxia.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms have occurred following abrupt discontinuance. Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

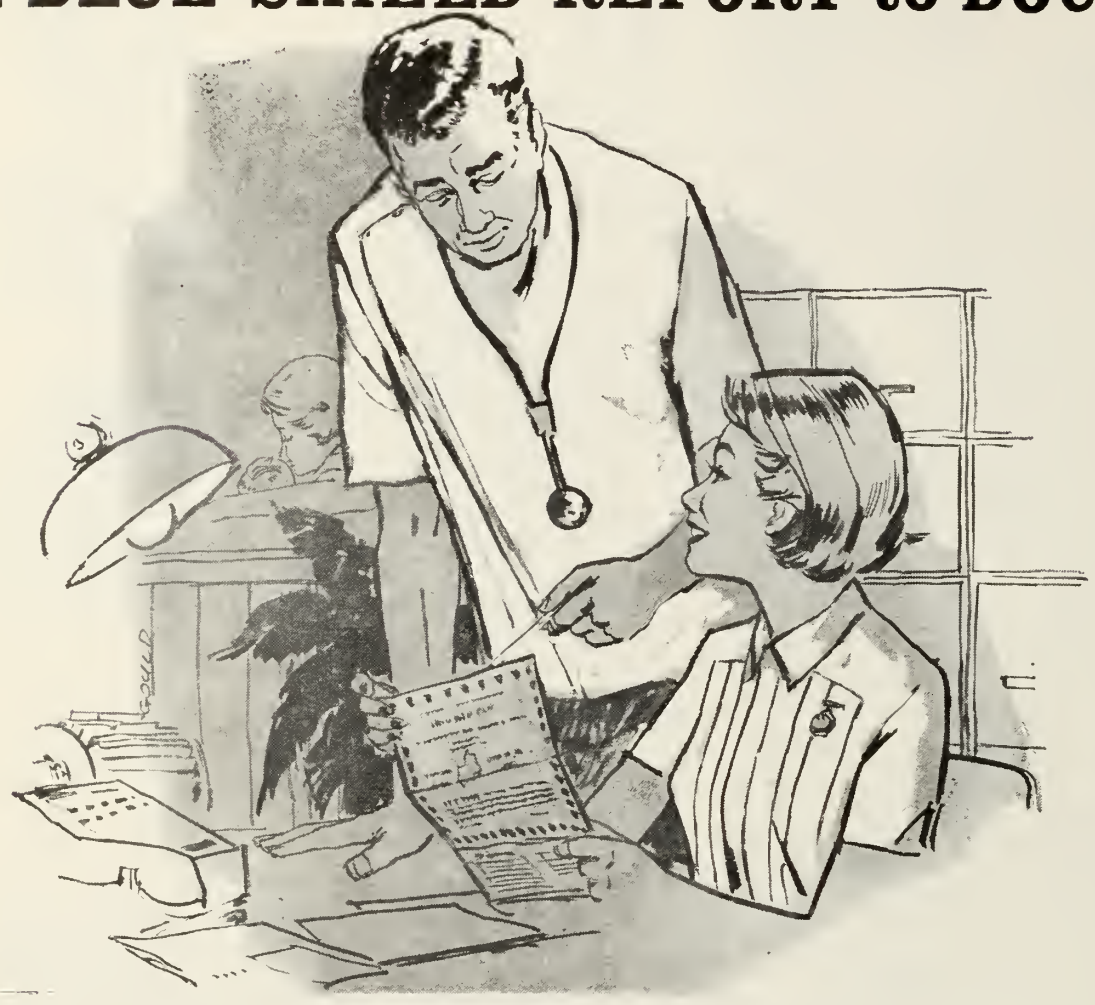
Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation, have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

Valium® (diazepam)

2-mg, 5-mg, 10-mg tablets

to help relieve psychic tension
and its somatic symptoms

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REPORT # 27

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unwelcome bedfellow for any patient– including those with arthritis, diabetes or PVD

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Quinamm™
(quinine sulfate 260 mg., aminophylline 195 mg.)

Specific therapy for night leg cramps



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Contraindications: Known sensitivity to sulfonomides; diagnosis or familial history of carcinomo of the genitol tract or breasts; precarcinomotous lesions of the vagino or vulvo; palpable uterine fibromyomo; mammory fibroodenomo; depressed liver function.

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Supplied: 'AVC/Dienestrol Creom'—Four ounce tube with opplicotor. 'AVC' ond 'AVC/Dienestrol Suppositories'—Box of 12 *with* opplicotor.

References: (1) Salerno, L. J.; Ortiz, G., ond Turkel, V.: Voginitis: A Diognostic ond Theropeutic Approoch, Scientific Exhibit, presented at the 115th Annuol A.M.A. Convention, Chicago, Illinois, June 1966. (2) Nugent, F. B., ond Myers, J. E.: Pennsylvonio Med. 69:44, 1966.

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AVC/Dienestrol

Cream (dienestrol .01%, sulfonilamide 15.0%, aminocrine hydrochloride 0.2%, ollontoin 2.0%)
Suppositories (dienestrol 0.70 mg., sulfanilamide 1.05 Gm., ominocrine hydrochloride 0.014 Gm., ollontoin 0.14 Gm.)

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Dulcolax works so effectively that the time of bowel evacuation can often be predicted.

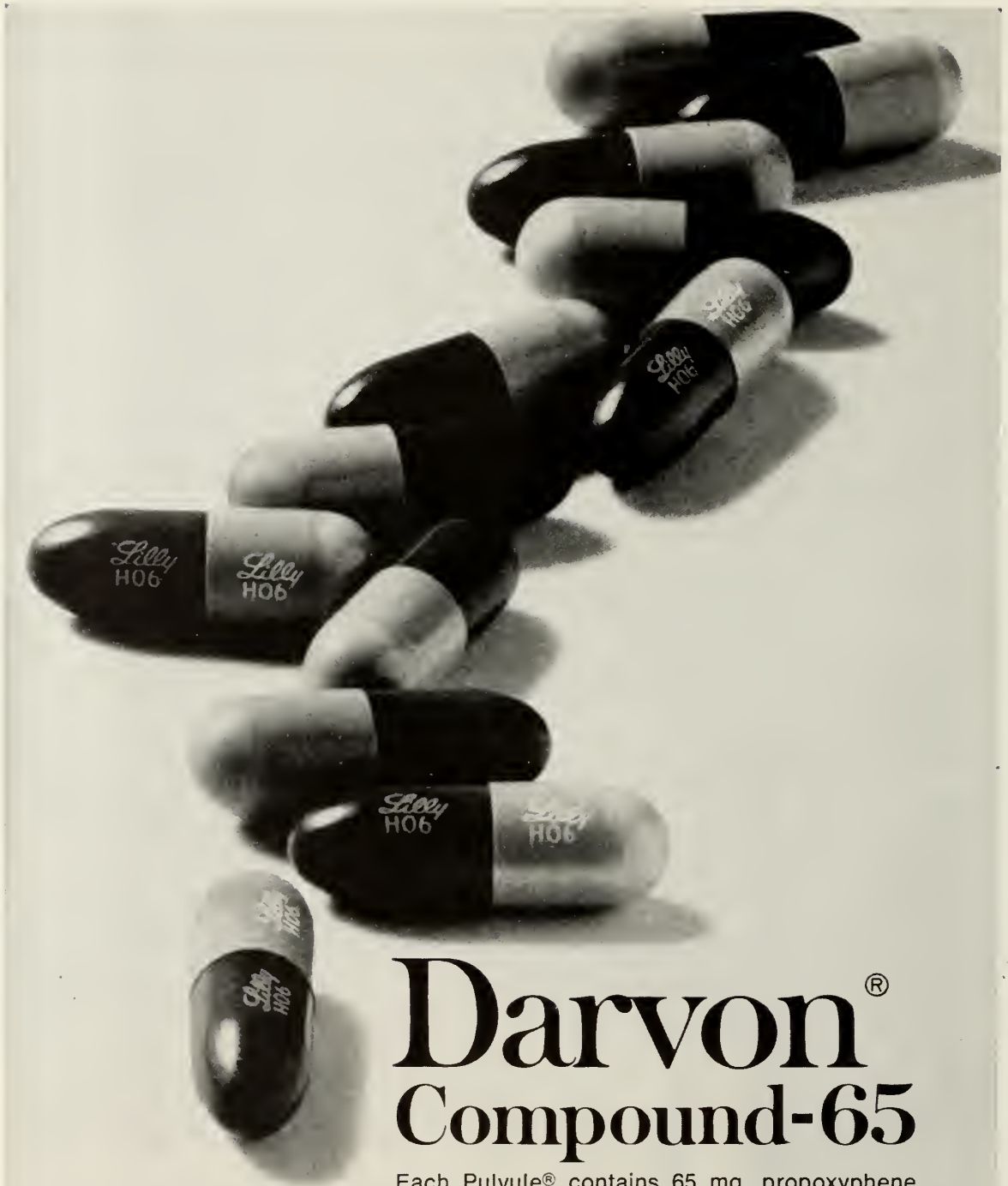
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Who is Caring for the Patient?

Clement A. Hiebert, M.D., *Guest Editor*

The word "doctor" means to teach and the word "nurse" to tend. For centuries, however, it was the physician alone who stood at the bedside, teaching, tending, and occasionally even curing. Historically, the starched figure in white is a late arrival on the hospital scene. In the beginning, there were indeed grave doubts whether the trained nurse was a blessing or a bane, a usurper and intruder, ever quick, as Osler's friend put it "to barter her heritage for a hoop of gold."

How different now! The flame kindled by Florence Nightingale burns more brightly than ever. Nurses, in the public eye, are an orbit higher than cherubim and just a shade lower than angels. In contrast, the prevalent image of the doctor has touched ground. How interesting that this should occur as the real ability of the doctor to relieve, to cure, and to prolong life is the greatest in history.

Why this paradox? For one thing, doctors have been increasingly preoccupied with electrolytes, electrophoretic patterns, and committee meetings to improve patient care, things which have displaced daily scrutiny of the patient's tongue or sitting at length by the bedside feeling his pulse. If the patient has felt shortchanged on his relationship to the doctor, his physician has been confident that biologically at least his patients' milliosmoles were never more perfectly in order. Insurance company statistics on longevity are on the doctor's side.

So nurses have filled a most important vacuum. The patient, jolted into an ambulance, shackled with an intravenous in one wrist and an identification band on the other, lies defenseless and stripped of his clothes and his identity as a human being. The good nurse knows this; time, sympathy, and an understanding heart are traditionally her great contribution. As medical science has continued to make new demands on doctors' services, nursing too has advanced in its own educational requirements. Were Florence Nightingale alive today, she would not have the college credits to become a director of nursing! Now, not just the doctors are spending more and more time away from the patient, but nurses too are increasingly occupied with learning the types of brain tumors, the workings of the artificial kidney, methodology of teaching, and the necessity to record a myriad of items on reams of paper deployed in charts and boards around the nurses' station. As the wheel of "progress" inexorably moves, the nurse turns over to the volunteer, the green maid, or the lemon aide the challenge which the busy physician first abdicated to the nurse.

Whether the foregoing is or isn't progress in the best interest of the patient remains to be seen. This much is certain. The practice of nursing, like the practice of medicine, is an intensely personal matter requiring more than a knowledge of books. Between the compassion and personal care so deeply wanted by the person in pain and the objectivity required in recording data and carrying out orders by the doctor-scientist, nursing remains the essential and human bond. The good nurse, like the good physician, knows that life's greatest satisfaction is personal service, and that, as Francis Peabody, a great Boston physician, put it so well "the secret of the care of the patient is in the caring for the patient."

The Doctor's Legacy

JOHN F. GIBBONS, M.D.

Most doctors are devoted to their families and fiercely interested in their present welfare and future security. However, whatever good intentions they may have, most physicians, in the stress of their daily work, put off until tomorrow" the very important matters which make up the sum total of their legacy. There seems to be something in the nature of all of us which deludes us into thinking that we can go on forever.

Possessing a somewhat compulsive nature and sharing the deep and abiding love of his family which is common to most physicians, the author has collected and categorized various data. These may be useful to the physician in preparing for his inevitable departure from his particular vineyard. If he takes the time and trouble to follow the suggestions which are presented, he will achieve a peace of mind not otherwise attainable.

Some years ago, the Philadelphia County Medical Society, with the excellent assistance of their Woman's Auxiliary, prepared two brochures. One of these was entitled "Set your Affairs in Order." The second was entitled "When the Doctor Dies." My interest in this subject arose at the time I first heard about those brochures. This interest continued in later years as I read innumberable articles having to do with varied subjects, such as the necessity for preparing a will; the value of protecting one's estate against unnecessary estate taxes; the composition of different kinds of trusts; etc. I became enthusiastic about the idea of setting one's affairs in order when I one day realized that most of the monetary rewards of hard work in the medical field are *really* enjoyed by most of us when they are given to our families, not to ourselves primarily. How foolish it would be to work so hard and not make an attempt to provide as much security and comfort for our families *after* we are gone.

What follows is a compendium of the various items which are necessary to adequately "set your affairs in order." Let me urge each of you to begin now a procedure for providing this information. This program should be done systematically–perhaps by working on it a couple of hours on one selected afternoon per week–until it is accomplished. In the process you may also find cause to reorganize your existing personal affairs in several constructive ways. The end result will provide you immeasurable satisfaction and peace of mind.

YOUR WILL

It goes without saying that the professional services of an able attorney are mandatory in this, the first step in organizing your legacy. Moreover, most of the goals and objectives spelled out in this paper will be met by industrious homework on the part of the physician, following the advice of a good and trusted lawyer.

* By every standard, an up-to-date will is the cornerstone of your legacy.
* Ask your lawyer if your will can still be relied on to distribute your property as economically as possible and to the persons you intend.
* Wills can "depreciate." To evaluate the adequacy of your own, the following questions should be answered:
    1. Have any beneficiaries named in your will died since the will was drawn?
    2. Have any beneficiaries become, since the will was drawn, more capable–or less capable–of managing their funds?
    3. Have children or grandchildren been born since your will was drawn?
    4. Does your will make gifts of specific property that you no longer own, or which has changed in character?
    5. Have any of the beneficiaries named in your will married since your will was drawn?
    6. Have you moved from one State to another since your will was drawn?
    7. Has the total value of your assets changed substantially since your will was drawn?
    8. Have you taken out more life insurance since your will was drawn? Have you become a participant in retirement plans or other fringe benefit programs?
    9. Is your estate less liquid now than when your will was drawn, so that you are uncertain there will be sufficient liquid assets for taxes, expenses, debts?
    10. Was your will drawn a long time ago, before important changes were made in the Federal estate tax law?
    11. If you have named an individual to settle your estate, has he become unable for any reason to carry out the duties you have assigned to him?

How many of your relatives or friends would voluntarily agree to be your executor if they knew what was involved? Perhaps your wife is *not* the best candidate to be your executrix considering the complexities of the task. In selecting *your* executor you might consider the following *partial* list of what an executor may be called upon to do:

* Locate witnesses to will and codicils
* Locate heirs
* Insure real estate, personal effects, cars, goods in storage, etc.

* Request family and postmaster to forward mail
* Check with banks as to deposits and loans, and settle the latter
* Remove valuables from dwelling and place of business
* Remove contents of safe deposit box, surrender it, and collect refund if available
* Arrange for appraisals of real estate, securities, and other property
* File inventory and appraisal
* Get tax waivers
* Sell a going practice
* Obtain and examine personal records, checkbooks, and copies of income tax returns
* File Federal income tax returns—
  (a) for the decedent, up to date of death, and
  (b) for the estate, for each year of administration
* Claim proceeds of life and accident insurance policies, and benefits from fraternal societies
* Ascertain jointly owned property
* Collect accounts and notes receivable
* Consider damage suit if death resulted from accident
* Consider Social Security claims and notify family
* Arrange disposition of any goods in storage
* Pay claims against the estate; defend the estate against unwarranted claims
* File Federal estate tax return
* File State inheritance or estate tax return
* Prepare accounting
* Pay legacies

Protecting Your Estate From Unnecessary Taxes

Here again, the best protection from this unnecessary invasion of your estate can be best provided by engaging the services of an able and reputable attorney.

Depending on your age and financial position, now may be the time to set up a trust document which will protect your estate from burdensome estate and inheritance taxes. This in itself might insure the education of your children. The simplest device is to leave half your property in trust for your children instead of out-right to your wife. This will shield your estate from a second round of taxes when your wife passes on.

Another move which could be relevant in your situation is to begin an annual program of bestowing gifts of cash or securities on your wife or children (utilizing the $3,000 annual gift tax exemption). Various other mechanisms to avoid the problem of unnecessary estate taxes may be relevant to your own problem. The important thing is to look into this matter with your lawyer.

Your Practice

A doctor who is prudent will prepare for the orderly continuation of his practice, in the event of his death, to protect his widow, his patients, and the good name of the profession. Patients would benefit in that the office might remain open and they could confer with a physician familiar with their medical histories. The widow would benefit by being relieved of the responsibility of disposing of her husband's professional property. Since the worth of any practice varies widely depending upon the specialty involved, the location and nature of the practice, and several other intangibles, there is no exact formula to fit all cases. However, a counselor conversant with professional estate planning could map out a plan, including the amount of life insurance most appropriate to the circumstances.

Disposition Of Your Practice
(A Widow's Fact Sheet and List of Instructions)

You may have personal preferences about leaving instructions regarding your own practice. The following is simply a suggested guide which will be useful to your widow and/or your executor.

A. *Probate of the Will:* Your attorney will do this.

B. *Disposition of narcotics and related matters:*
   I. Narcotics remaining must be turned in to the Treasury Department, Bureau of Narcotics. There is no reimbursement for unused drugs.
   II. Narcotics Tax Stamp must be returned to the Augusta Office of the Internal Revenue Service.
   III. Narcotics Order Book also must be returned.
   IV. Narcotics Ledger must be retained for 2 years.

C. *Disposition of drug samples and other medications:*
   I. Do not throw away unless opened, unlabeled or deteriorated.
   II. Any purchased drugs may be returnable for refund if unopened. Perhaps the Doctor's supplier or pharmacist would be kind enough to help in this matter.
   III. Your religious organization may have suitable Mission use for them.

D. *Patient Records:*
   I. These are important and confidential records which should be carefully preserved.
   II. The contents of such records should be disclosed to another physician if the patient so requests. Such a request should be in writing and should be retained with the records. Normally, the records are confidential and diagnostic information in them should not be disclosed directly to the patient because of the risk that he might misinterpret them.
   III. All patients' records should be kept for a minimum of ten years. Records of patients who were minors when treated should be preserved until two years after the patient reaches twenty-one. Where possible, records should be kept for twenty-five years.

E. *Telephone:* If there is an answering service, this can be a very helpful way of notifying patients of the Doctor's death with possible suggestions regarding their continued care. It is suggested that this service be retained for at least a month.

F. *Notifying patients:* Perhaps a simple sign on the office door "Call (office phone number)" will relieve your survivors of the burden of contact with most of the patients and the answering service can take care of the matter.

If the physician's secretary is retained temporarily, she might perform this service by being present during usual office hours. She also could notify patients with future appointments during this time.

G. *Taxes:* The accountant and/or attorney should take care of all of this in connection with the financial records.

H. *Stopping advertising mail:* It may take a year for knowledge of the Doctor's death to reach all the mailing lists: there is no central clearing office. Your survivors may perhaps choose to let it run out in this fashion, or they may write "Deceased return to sender" on each piece and mail it back. While the latter course might entail some effort initially, it will rapidly and effectively cut off the flow.

I. *Insurance Agent and/or Trustee:* A preliminary brief conference might be in order to settle the question of immediate funds, documents to be located, and arrangements for a later, detailed conference. Prompt notification of such people is important.

J. *Consideration of Sale of Practice:* If the practice is to be sold, with or without real estate (and it may be difficult without real estate) relatively rapid action is advised, for it will quickly lose value. It can be advertised in the *Journal of the American Medical Association,* etc. There are also agencies which specialize in such matters. Professional status of prospective buyers can be verified with the Maine Medical Association.

K. *Real Estate:* Except for practice-connected real estate, a hasty decision on sale or retention is not advised. It is hoped that the doctor has made known his views on this subject.

L. *Temporary coverage of patients:*

A. Some arrangement with a colleague should be made immediately as regards patients in the hospital.

B. While not required, it would be a courtesy to be able to suggest a colleague to other patients.

M. *Malpractice Insurance:* A refund on unused premiums may be possible. Find the policy and consult the local agent.

N. *Liability and other Insurances:* Certain policies issued with reference to the practice might have provisions for refund of unused premiums. Consult the issuing company or the insurance agent.

O. *Blue Cross and Blue Shield:* A "widow's policy" should be sought.

P. *Veterans Administration:* If the Doctor was a Veteran, notify the Veterans Administration with the indicated information and apply for deserved benefits.

Obtain Veterans Administration Fact Sheet IS 1 from the Veterans Administration. It contains a good summary.

In this connection, save the Doctor's discharge papers permanently. It is possible that Pensions or other forms of remuneration may be provided in the future.

Q. *Social Security:* If there is any possibility of coverage, *visit* the local Social Security office with the Social Security number.

R. *Automobile* (s): Title, if in Doctor's name, can be transferred with assistance of automobile club, if a member. Also be sure insurance coverage is retained.

S. *Equipment:* It is best disposed of as part of the practice, if possible. Otherwise, it might be possible to obtain an estimate of value from one of the reputable equipment vendors and then sold either privately, through professional advertisement, or to a dealer in used equipment. The sale value of used equipment is disappointingly low.

T. *Current bills:* These must be paid, but not until the court has approved the Executor or appointed the Administrator of the Doctor's estate.

U. *Magazine subscriptions:* Those purchased for office use might be checked for possible stoppage and subscription refund if you do not wish to continue them.

V. *Dues:* There is ordinarily no refund on Medical Society dues unless hardship exists.

W. *Securities:* It is worth noting that Securities can be used as collateral to meet financial needs rather than sold.

The Doctor's Check List
(Setting your Affairs in Order)

The following items will probably be needed by your executor or your family. A systematic setting down of the items requested, putting them in one central location, and explaining them to your wife will be of great benefit to her. It will avoid the unnecessary confusion, trouble and added grief which is often superimposed upon a widow's bereavement.

She will probably need to know these items:

1. Funeral Director: Name, address, phone number
2. Cemetery Lot: Location of deed
3. Attorney: Name, address, phone number
4. Insurance Agent (and/or Estate Planning Manager): Name, address, phone number
5. Accountant: Name, address, phone number
6. Stockbroker: Name, address, phone number
7. Will: Location, location of any codicils
8. Life Insurance: Location of policies
9. Securities: Location of policies
10. Cash: Location of receipts, unbanked cash, source of cash for immediate needs.
11. Social Security Number
12. Trust (if established): Name of Trustee, address,

phone number, name of bank's representative, phone, extension if the trustee is a bank.
13. Home: Location of deed, mortgage papers, etc.
14. Office: Location of deed or lease, mortgage papers, duration of lease or mortgage, provision for settling in event of death
15. Other real estate: Location(s) of deed(s) or mortgage paper(s)
16. Other Insurance: Location of policies
17. Temporary coverage of the Practice: Name, address and phone number of an associate
18. Veterans Administration: Branch of Service, date of discharge, service number, VA number(s), locations of discharge papers
19. Current unpaid bills: Location
20. Outstanding obligations: Notes, mortgages, pledges, charge accounts, credit checking accounts, etc. Details
21. Safe Deposit Box(es): Location(s), number(s), locations of keys
22. Savings Account(s): Location(s) of pass book(s)
23. Checking Account(s): Location(s), Location(s) of check book(s)
24. Financial Records: Location
25. Narcotics: Location of drugs, tax stamp, narcotics ledger, narcotics order book
26. Equipment (Major): Purchase price, sales outlet
27. Tax Information: Location
28. Notifying patients: Method preferred by the Doctor, location of appointment book for future appointments (this is discussed earlier)
29. Notification: Hospital(s) – (Administrator), phone numbers; colleagues, phone numbers. Societies, etc., phone numbers
30. Blue Cross, etc.: Policy numbers of Blue Cross, Blue Shield and other Health Insurance
31. Accounts Receivable: Location, the Doctor's views on collecting current and delinquent bills
32. Notes, loans, mortgages, etc. due from others: Location of items
33. Employee(s): Name(s), address(es), phone number(s), details of termination of services
34. The Doctor's views on disposition of property, securities, anticipated income, etc.
35. Birth and Marriage Records: Location
36. Citizenship Papers (if applicable): Location

Summing Up

To some, the foregoing may seem to represent a task almost too involved and lengthy to tackle. To others, it will provide a useful blueprint to organize their legacy. To still others it may have useful sections.

If you choose to utilize this material in a constructive fashion you will be well prepared for that hopefully far-off day of departure; and as the poet William Cullen Bryant wrote, you can, "sustained and soothed by an unfaltering trust, wrap the drapery of your couch about you, and lie down to pleasant dreams."

Author's Note

The material in this article is largely a compendium of writings freely plagiarized from various articles and brochures. In the main, the authors were unknown and therefore cannot be suitably acknowledged.

22 Bramhall Street, Portland, Maine 04102.

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The President's Committee
on Employment of the Handicapped
Washington, D.C. 20210

Regional Cancer Chemotherapy: Infusion, Perfusion and Confusion

Robert E. McAfee, M.D.*

Despite advances made in the surgical management of malignant disease and in the use of different forms of radiation treatment, cancer continues to be the second most common cause of death in the Western world. Even in the more favorable types of cancer, the overall five-year survival rarely exceeds 50%. Consequently, there are a large group of patients with advanced carcinoma who are beyond cure or control with surgery or radiation. Many of these patients now may be candidates for newer forms of cancer control introduced in the past ten years. For example, patients with head and neck cancer, primary and secondary cancer of the liver, cancer of the uterine cervix and bladder and extremity malignancies may derive relief of symptoms with tumor regression and prolongation of useful life with regional chemotherapy.

As of this writing, with the possible exception of asparaginase and its effect on tumor cells, there is no exploitable biochemical difference between malignant and normal cells. However, much work has been done developing techniques of enhancing the effect of current available drugs such as by the regional administration to the patient with advanced but locally confined cancer. Several procedures are currently available and are utilized in our area. Of these, the techniques of prolonged arterial infusion of antimetabolite drugs and the isolation perfusion of extremity tumors have been most useful and promising in our hands.

Definitions: A. *Prolonged arterial infusion* – This is the technique of administering a drug – usually the antimetabolites Methotrexate® and 5-fluorouracil as well as Actinomycin D in our experience – into the arterial supply of a tumor bearing area via small polyethylene or Teflon catheters. This allows a high concentration of drug in the tumor area which is rapidly reduced by passage through the tumor, resulting in low systemic dose and therefore less toxicity. As a result, the drug can be administered for periods of weeks to months in an attempt to expose all malignant cells to an adequate dose of drug during their vulnerable period. Ingenious techniques utilizing systemic antidotes such as citrovorum factor or Leucovorin® to combat the effects of Methotrexate, are used to give even higher doses of drugs locally with less systemic toxicity. The work of Sullivan and Watkins of the Lahey Clinic has been classic in this field. They have also been most gracious in their cooperation and assistance to us in establishing our arterial infusion program.

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The techniques of catheter introduction, determination of position, maintenance of position, pump equipment and drug doses are beyond the scope of this brief paper and are well documented in the literature. The technique is not without complication but these are readily minimized with equipment and procedure familiarity. There have been no major complications with our arterial infusions in the past two years despite some of the patients being infused from six to nine months.

Who should receive infusion? Obviously any patient who presents with a tumor which can be cured or controlled with conventional surgery or radiation should receive these standard forms of care. At the present time, we are treating a series of patients with Stage 2 and 3 head and neck cancer, that is, with unilateral primary tumor with cervical node metastasis. We begin these patients on infusion therapy, first on an ambulatory basis, then after two to three weeks, begin concomitant cobalt radiation for periods of two to three months and the early results seem to justify the continuation of the technique. In addition, patients wih primary or secondary cancer of the liver, provided the extra-hepatic primary is controlled, have benefitted from infusion with reduction in size of the liver as well as improvement in the chemical functions. The necessity of preoperative knowledge of the extremely variable blood supply of the liver, as advocated by Watkins, has been apparent in our small series. Patients with Stage 2B and 3 cancer of the uterine cervix have also benefitted from pelvic infusion with improvement in pain, alleviation of urinary obstruction and rectal symptoms. Although brain tumors as well as bladder tumors remain localized and would seem to be ideal candidates for infusion, we have not found a satisfactory agent or drug that would justify continued attempts. Our results from the infusion will be reported in a future paper. The published results of others such as Sullivan, Golumb, Rochlin, Ryan and Rush, among others, indicate the usefulness of the technique.

B. *Isolation Perfusion* – This technique is utilized in the management of extremity malignancy including melanoma as a method of treating in-transit metastases at the time of primary treatment, as well as a means of controlling obvious recurrences. The perfusion is designed to isolate a tumor-bearing area by mechanically limiting the arterial inflow as well as the venous outflow tract by means of an extracorporeal circuit with heat exchanger. Because the systemic leak of the drug so administered is carefully monitored with radioactive isotope, the technique allows a large dose, sometimes supralethal, to be administered to the tumor area. Drugs

used are the short acting alkylating agents such as nitrogen and phenylalanine mustard, cyclophosphamide and Actinomycin D. The drug is perfused through the extremity for periods of one to two hours and then recovered and the circuit flushed thoroughly before normal flow is restored. The ability to warm the perfusate to 110 degrees has allowed much greater effectiveness of the technique by increasing the binding capacity of the drug to the tumor cell.

This technique now forms the basis of our primary treatment of melanoma and sarcoma of the lower extremity and or the distal upper extremity. It is also the treatment of choice for recurrent melanoma in these areas. It is used in all instances as an adjunct to surgical therapy in an attempt to cure the disease. Our small series of cases to date does not allow any significant conclusions, except to state that nine of the ten paients so treated are still alive, eight of them free of disease, up to fourteen months post perfusion. The reader is referred to the work of Stehlin, Creech, Krementz and Rochlin for more significant long term results. Conclusions that can be made at present, particularly as regards melanoma, are the following:

1. The incidence of recurrence in the extremity is reduced.
2. If recurrences are to develop following perfusion and lymphadenectomy, the perfusion seems to forestall their appearance until systemic disease is manifest.
3. Perfusion reduces significantly, though does not eliminate, the need for radical amputation.
4. The five-year survival rate when perfusion is used seems to be increased of the order of 25%.

Conclusion

Regional chemotherapy is a valuable adjunct in the initial treatment of potentially curable cancers such as melanoma of the extremities, sarcomas of the extremities, certain carcinomas of the head and neck and uterine cervix. Intra-arterial infusion is the better choice for recurrent tumors of the liver, pelvis, chest wall, and head and neck. Perfusion is better for the extremities. Except in rare instances, neither modality can be employed with the expectation of more than temporary palliation. Limited as this is, in the suitable case it can result in sufficiently meaningful improvement in comfort, performance and mental attitude to warrant its use.

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HIBAC Announces Recommendations

Medicare's Health Insurance Benefit Advisory Council recommends that HEW set minimum standards for hospitals, rather than relying upon the Joint Commission for the Accreditation of Hospitals. At the start of Medicare, HIBAC said in its annual report, this reliance helped in acceptance of Medicare from the health professions. The report continued — "The Council has found reason for concern that JCAH standards are not applied with the frequency of inspection and range of inspector skills necessary to assure a high degree of effectiveness."

In other recommendations, the HIBAC called for legislation allowing HEW

* To set and enforce standards for physicians.
* To drop physicians who abuse Medicare.
* To set standards for Medicare ambulance service.
* To place all home health benefits under Part A; drop the 3-day hospital stay requirement; and to provide for as many as 200 visits a year.
* To allow Medicare payment for immunization.
* To eliminate the blood deductible.
* To reduce the current certification periods for in-patient hospital care from 14 to 21 days to 12 and 18 days. (It seems that discharges "peak" on the 14th and 21st days.)
* To tie reimbursement to planning.

Surgery in the Hemophiliac

Louis G. Bove, M.D.*

In the past, it has been generally agreed that the surgical treatment of hemophiliacs should be avoided whenever possible. However, in 1958 Biggs and MacFarlane showed that the degree of postoperative bleeding in Hemophilia A, classical hemophilia; was directly related to the level of Factor VIII (antihemophilic globulin or AHG). Thence in 1965 two concentrates of Factor VIII[1,2] became available which has enabled the physician to maintain Factor VIII at such a level which would prevent postoperative bleeding and not cause circulatory overload. These concentrates, and others, are now available commercially to any physician or hospital. Surgery may be undertaken not only at the research or teaching center, but at the level of the community hospital. It would seem pertinent to outline some practical guidelines for the medical management of the hemophiliac through surgery for those physicians in community hospitals who might have to face this problem.

As a brief review one is reminded that the hemophiliac syndrome is the most common of the inherited bleeding disorders,[3] and includes both Hemophilia A, classical hemophilia, in which there is a deficiency of Factor VIII (antihemophilic globulin or AHG), and Hemophilia B, Christmas Disease, in which there is a deficiency of Factor IX (Christmas Factor, plasma thromboplastin component or PTC). Generally patients with Hemophilia A are said to outnumber patients with Hemophilia B by 6 to 1. In our state and in the hemophiliac clinic at the Maine Medical Center, this ratio is only 4 to 1.

Our experience comes from managing hemophiliacs through various surgical procedures: neurosurgical, general surgical (including a sub-total gastrectomy and a splenectomy), orthopedic (both elective and traumatic), and major dental procedures. The methods and materials used have varied and have depended on the concentrate available at the time. This includes cryoprecipitated human Factor VIII, glycine-precipitated Factor VIII, and the new high-potency glycine-precipitated Factor VIII (Method Four). Patients come from throughout the state and are registered in the Hemophiliac Clinic of the Maine Medical Center which currently number thirty-six patients. All elective procedures have been restricted to patients with Hemophilia A, as concentrates of Factor IX have just become commercially available. Hemophilia C associated with a deficiency of Factor XI (plasma thromboplastin antecedent) is a much milder problem and can be easily managed by daily infusions of fresh or aged refrigerated plasma. This type of hemophilia will not be discussed as it differs clinically from Hemophilia A and B.

Indications for surgery in hemophilia are exactly the same as in the non-hemophiliac provided no circulating inhibitions are present and adequate materials for proper replacement are available in advance. The one exception which is generally agreed upon is that tonsillectomies should not be done on an elective basis. Most of the surgical failures are due to inadequate treatment or the lack of availability of the proper treatment materials.

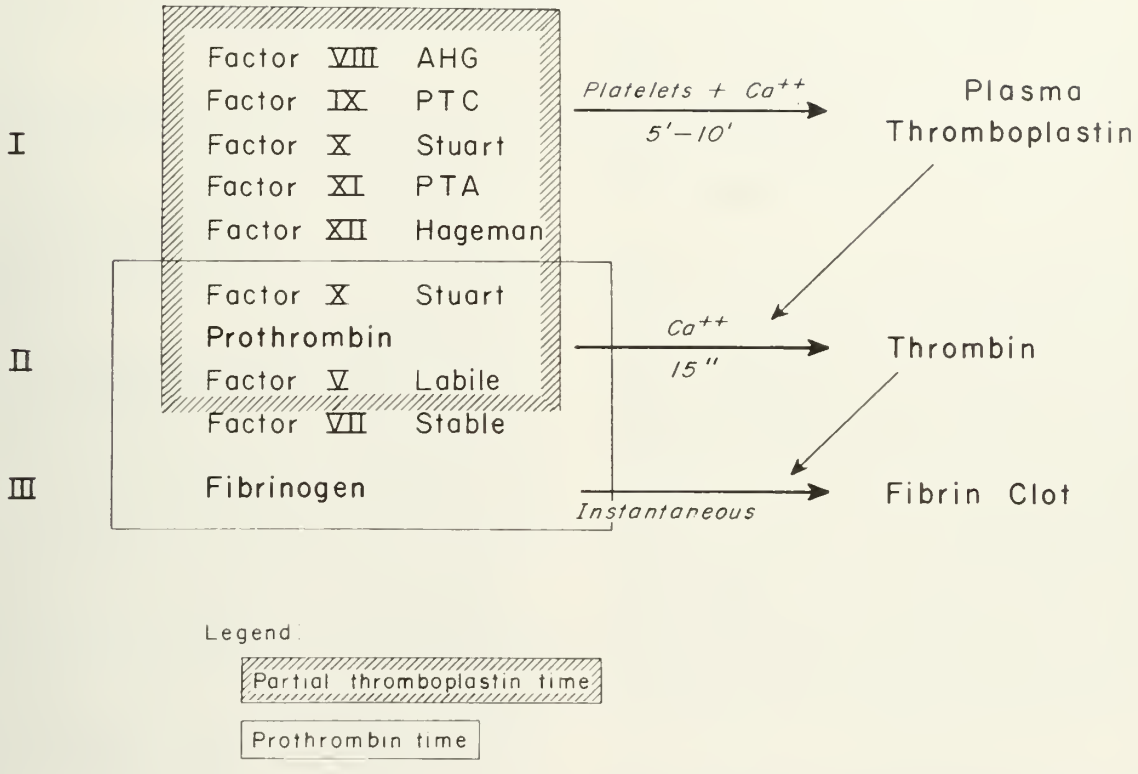
Proper laboratory and blood bank facilities are essential. One should be prepared to do AHG assays[4,5] as the only certain method of following patients with Hemophilia A postoperatively. There has been some writing to suggest that the partial thromboplastin time (PTT) might be an adequate means of following patients.[3] The PTT is a simple laboratory coagulation test which reflects Stage I clotting or the intrinsic system (Fig. 1). It is known that the PTT is ordinarily sensitive to Factor VIII deficiency up to 25-30% Since the level of 30% AHG is most often given as that level necessary to prevent excessive bleeding, complete normalization of this test would be required. However, Britten[6] has shown that the PTT may never come down to normal, even with Factor VIII levels above 100%. Our experience also shows that the PTT is not a consistent guide; it may not be normalized although clinically the patient is doing well without bleeding. It may also be, that bleeding in the face of an abnormal PTT may be due to other problems rather than inadequate replacement. We use the Kaolin-activated PTT[7] which has a sharper end point, normal range 25-40 sec. The PTT may be helpful however, to those doing an emergency procedure when AHG assays are not available and one is aware of its limitations. We do not regularly test for the presence of inhibitors. Careful attention is first given to the history recognizing that about 12% of all classical hemophiliacs will develop inhibitors within 2-3 years of their first treatment.

In Hemophilia A, safe surgery cannot be done with the use of blood or fresh plasma alone, as sufficiently high Factor VIII levels cannot be achieved without circulatory overload, and congestive heart failure. One must use one of the Factor VIII concentrates. Our major experience is with two of these concentrates; cryoprecipitated Factor VIII,[1] and the new high potency glycine-precipitated Factor VIII (Method Four)[6].

The cryoprecipitate is prepared by the method of Pool and Shannon. Donors are of the AB-Rh Negative blood type, and plasma is obtained by plasmapheresis. This material is dispensed as a blood product by the blood bank, but is accepted as a drug for insurances pur-

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Fig. 1



poses. Each cryoprecipitate unit, processed from one unit of plasma is dissolved in 10-20 ml of supernatant plasma, and them frozen for later use. The Factor VIII purification is about 20-fold. The mean number of cryoprecipitate units necessary to raise a patient's Factor VIII level by 30% is 1 unit per 10 kilo body weight. Since the Levels of Factor VIII vary in normal donors from 50-200%, the yield in a single unit of cryoprecipitate varies. This factor as well as technical factors necessitated some variations in dosage re: treatment.

The antihemophilic factor (human) Method Four* is available commercially. This represents more than a 100-fold purification of Factor VIII. It is stored refrigerated in a lyophilized form and is reconstituted with sterile water before use. The product has the advantage of producing predictable rises in Factor VIII levels as each vial is assayed and the units of AHF** are recorded. Vials come in units of 125, 250, 500 and 1000. Because this product is a derivative of pooled plasma, it entails a higher risk of contamination with hepatitis virus.

In Hemophilia A, 1.5u of cryoprecipitate per 10 kilo of body weight or 20 Factor VIII units of AHF Method Four per kilo of body weight should be given as a priming dose just prior to surgery. Thence maintenance therapy with lu of cryo per 10 kilo, or 15 Factor VIII units per kilo should be given at 12 hourly intervals. This replacement program should give a Factor VIII level of maximum 35-40% and a minimum of 15-20% of normal twice daily. There are other programs which bring the Factor VIII level to 100% only once a day. It is obvious that there is no single replacement program but the former has been in effect longer and is known to be successful. Therapy must be continued for the whole period of wound healing, i.e., 10-12 days. Therapy for the mild or moderate hemophiliac is essentially the same as the severely affected patient if his level is below 10% of normal. Only in the extremely mild hemophiliac whose AHG levels are 15-30% can that dose schedule be reduced.

These dosage schedules are merely a rule of thumb. The achieved Factor VIII levels depend on a variety of factors: Factor VIII activity of the particular material used, the extent of bleeding surface in the wound and the amount of bleeding, as well as the Factor VIII disappearance rate in the individual patient.

Replacement therapy for patients with Hemophilia B up to now has been accomplished with the use of plasma alone. This is due to the longer in vivo survival of Factor IX and the lower requirements for safe surgery. A pre-surgical loading dose of 11-15 ml/kg is given, followed by 11 ml/kg at 12 hourly intervals; towards the end of the treatment program this dose could be given at 24 hour intervals. Recently there is a commercially available source of Factor IX*** which also has Factor II,

*Hemofil, prepared by Hyland Lab. Costa Mesa, California.
**One Factor VIII unit is the amount of Factor VIII contained in 1 ml of average normal plasma.
***New Konyne, Prepared by Cutter Laboratory, Berkeley, California.

VII and X[9]. We have no experience with its use but do welcome its availability.

One cannot discuss this subject without the mention of the possible benefits of cortico-steroids and epsilon aminocaproic acid. Basically these have not been used, with the exception that some dental extractions have been done with the addition of Prednisone to the normal replacement program. I cannot say it has been of objective benefit. Neither drug has been used in major surgical procedures.

Using the above program, we have carried twelve hemophiliacs through sixteen surgical and major dental procedures in the past four years. No deaths have occurred from hemorrhage or its complications. One patient died of pseudomembranous enterocolitis after a small bowel resection for intestinal obstruction. Three patients have developed viral hepatitis. All three had received both whole blood and one of the commercially available concentrates.

There is no Red Cross Blood program in our state and cryoprecipitate must be obtained through the busy schedule of the hospital blood bank. Reserves of cryoprecipitate are thus limited, and it has been used in the treatment of the acute bleeding problems primarily. We have relied heavily on the commercially available concentrates for elective surgery.

Summary

Surgery in hemophiliacs is no longer necessarily life threatening. If the proper replacement material is available, and the physician is aware of its use and the limitations, emergency and elective procedures can be done in the community hospital safely.

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Muskie Hearings Develop Push For National Health Insurance

Hearings before Sen. Edmund Muskie's Health Subcommittee of the Senate Special Committee on Aging turned into a virtual forum on National Health Insurance. Muskie released a report by a committee advisory panel which called outright for a compulsory health insurance plan.

The report was signed by *Agnes W. Brewster,* former HEW medical economics consultant; *Dr. S. J. Axelrod* of the University of Michigan; *Mel Glasser* of the United Auto Workers Union and *Bert Seidman* of the AFL-CIO. Mrs. Brewster is a consultant to UAW President Walter Reuther's Committee for National Health Insurance.

Meantime, AMA renewed at its national convention in New York a drive for the Association's national health insurance plan. AMA's proposal is for a tax credit system with a negative tax for the poor.

Hypercalcemia Associated With Malignancies Unexplained by Bone Metastasis

Case Reports and Review of Literature

GHOLAMALI MOZAFFARIAN, M.D.*

Elevation of serum calcium as a complication of malignant disease associated with bone metastasis is well recognized.[1–7]

Hypercalcemia due to malignant diseases, but unexplained by bone involvement, was first noticed by Albright and Reifenstein.[8] The patient was suffering from hypernephroma with metastasis to the sacrum and ilium. There was evidence of hypercalcemia, hypophosphatemia, hypercalciuria, and a normal serum alkaline phosphatase. The parathyroid glands were normal. These authors raised the question of whether or not the tumor produced a parathyroid-like substance.

Another similar case appears in the case records of the Massachusetts General Hospital.[9] This patient had hypernephroma and an area of direct bony invasion which was limited.

It was not until 1953 that another case of malignancy was reported[10] in whom hypercalcemia was not associated with any bony metastasis. This was the case of an elderly man with hemangiosarcoma of the liver, and a small localized carcinoma of the prostate. In this patient, a high serum calcium, normal or slightly elevated serum phosphorus and an elevated serum alkaline phosphatase developed.

Since that time, many other investigators have noted the association of several malignancies with hypercalcemia unexplained by bone metastasis.[4,5,11–20] These have included carcinoma of the breast, lung, kidney, uterus, ovaries, cervix, pancreas, prostate, thyroid, colon, bladder and leukemia, malignant lymphoma and Hodgkin's Disease. Abdominal carcinomatosis without bony metastasis has been reported in association with hypercalcemia.[18]

Among the cases presented by Myers,[2] there were 225 patients with breast cancer who showed hypercalcemia. X-ray studies of skeletal system were negative in only 14 of these patients.

Hypercalcemia associated with bronchogenic carcinoma has been extensively studied.[4,12–16] The incidence of hypercalcemia in bronchogenic carcinoma in 100 patients of Carey[13] was 8%. Six of these patients did not show any evidence of bony metastasis and there was no other condition to explain hypercalcemia except the tumoral process. In another series of 119 patients[15] with bronchogenic carcinoma, the incidence of hypercalcemia was 13%, and in none of these patients was any bony metastasis found. After resection of the tumor in a patient of Connor, et al,[12] the serum calcium fell to normal. These authors suggest that hypercalcemia is "due to excessive bone resorption resulting from a substance introduced into the circulation by the tumors." A similar case was seen in a patient with squamous cell carcinoma in whom a fall of serum calcium and a rise of serum phosphorus was observed following excision of the tumor.[21] A second rise in serum calcium and a fall of serum phosphorus occurred following re-growth of the tumor. In this patient, the parathyroid glands were normal and no bony metastasis was noticed at autopsy. Two of Turkington's four cases had a similar course.[16] Surgical extirpation of the lung caused all abnormal parameters to become normal, and irradiation in two other cases caused a transient response.

In 1956, Plimton and Gellhorn[17] reported ten cases of malignant diseases associated with hypercalcemia. There was no evidence of any bony metastasis in eight of these patients, the other two had either limited metastasis or local bony invasion. The patients exhibited symptomatology characteristic of the hypercalcemic state. The parathyroid glands were invariably found to be normal at either operation or autopsy. In this group, four patients had a hypernephroma associated with hypercalcemia and elevation of the sedimentation rate. Serum phosphorus was normal in the latter group, and the alkaline phosphatase was elevated in three of them. In two (of four) cases of hypernephroma, and in one case of ovarian carcinoma which were thought to be operable, removal of the tumor was followed by a prompt fall in serum calcium. In the one with carcinoma of the ovary, recurrence of the tumor was, however, associated with elevation of serum calcium.

The patient of Thomson, et al[19] presented with weakness and vomiting. Further followup revealed hypernephroma associated with elevation of sedimentation rate, serum alkaline phosphatase and serum calcium. Excretion of 24-hour urinary calcium and phosphorus was markedly elevated. Phosphate clearance was normal. There was no bony metastasis in a skeletal survey by x-ray. After removal of the tumor serum calcium and alkaline phosphatase became normal in three days, postoperatively. Hypercalciuria persisted until two to three months after the operation, but all values including serum calcium, serum phosphorus, alkaline phosphatase and excretion of 24-hour urinary calcium were within normal limits 17 months postoperatively.

The two following cases illustrate association of hy-

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percalcemia with malignant diseases without involvement of the bones. In the first case, hypernephroma was found with pulmonary metastasis. This patient presented with hypercalcemic picture after nephrectomy. The second case presented with adenocarcinoma of the ileocecal area with massive hepatic metastases, and sustained hypercalcemia. In neither of these two cases were radiographic survey of the bones or post mortem examination positive for metastasis.

Case Reports

Case No. 1: Hospital No. 79244: The patient is a 50-year-old white male concert pianist who was admitted to the Maine Medical Center in May of 1968 because of gross, painless hematuria with terminal clearing. He also complained of malaise, dry cough and weight loss of approximately 8-10 months' duration. The hematuria was first noticed by him two months prior to admission.

Physical examination was essentially negative, except for occasional wheezes and a few persistent dry rales in the bases of the lung. Sigmoidoscopy and barium enema were negative. IVP revealed disruption of the right calyceal configuration. Chest x-ray showed enlargement of the hilar lymph nodes and diffuse peri-bronchial changes in both lower lung fields. Plain film of the abdomen showed many calcified mesenteric lymph nodes. Urinalysis showed hematuria and trace of albumin. Complete blood count revealed mild anemia with a normal cell count and differential. Partial Prothrombin Time, BUN, electrolytes, bilirubin, SGOT and LDH were all within normal limits. Many sputum smears for acid fast bacilli and cytology were negative. Serum calcium was tested once and was 10.5 mgs%. Protein electrophoresis showed a total protein of 6.08 mgs% and increased Alpha I and Alpha II globulin and decreased albumin and transferrin. Repeat IVP and kidney scanning revealed a suspected tumor of the right kidney a few days later. The patient was operated on on the sixth hospital day. The right kidney was removed and the tumor was found to be a hypernephroma. Postoperatively, urinalysis was negative, and blood urea nitrogen was 25 mgs%. The patient was discharged three weeks after the operation. Repeat chest x-rays showed increase in pulmonary inflammatory changes.

The patient was admitted 17 days later because of cough, gagging, headache, indigestion, abdominal pain, nausea and shortness of breath mostly on exertion. On the second admission, temperature was 100° F., and the rest of the vital signs were normal. Physical examination was essentially negative except for a few fine basilar rales in the chest, and diffuse and slight enlargement of prostate on rectal examination. Sigmoidoscopy was negative. X-ray findings were those of advanced infiltrative changes in both lung fields, enlargement of the hilar lymph nodes. A small acute superficial duodenal ulcer was identified on GI series. Metastatic bone survey by x-ray was negative. Urinalysis revealed a specific gravity of 1.010, 10-15 red blood cells, 10-15 white blood cells, a few granular casts and 2+ bacteria. Complete blood count showed Hgb of 10 gms%, white blood count of 8,876 with a slight shift to the left. Stool guaiac tests were negative on numerous occasions. Many sputum studies for acid fast bacilli and cytology remained negative. LDH was normal. SGOT was slightly elevated. Serum alk. phos. was 152 (SMA 12/60 normal 30-85) serum acid phos. was normal. Erythrocyte sedimentation rate 60mm uncorrected by Westergreen method. Fasting blood sugar was normal. Serum uric acid was 9.7 mgs.%. Bilirubin and cholesterol was normal. Antinuclear antibodies were negative. Serum albumin was decreased and globulins were increased. Urine excretion of phos. was 2420 mgs. and of calcium 169 mgs. in 24 hours. Serum creatinine was 2.1 mgs%. Serum phos. was normal. Serum calcium was 14.4; 14.9; 15; 13.6; 12.5; 13.1 mgs% and blood urea nitrogen was 29; 60; 60; 46; 34; and 46 mgs% during the course of hospitalization. Bronchoscopy was negative, but biopsy of the lung showed invasion of the lung tissue by an anaplastic tumor which was consistent with adenocarcinoma arising from the kidney. On the seventh day the patient was started on Testosterone 100 mgs. I.M. daily and Hydrocortinsone 500 mgs. I.V. daily. He did not show any improvement and expired on the 25th day of hospitalization.

Post mortem examination showed metastatic carcinoma arising from the kidney, which was limited to the lungs for the most part. The manifestations of the tumor in the lungs grossly were spectacular in extent. Microscopically this was even more unusual in the apparent anaplasia and rapidity of growth. There was little evidence in the sections of any pneumonia. Bones and the marrows did not show any evidence of metastasis in those areas which were examined.

Case No. 2: Hospital No. 88925: The patient is a 46-year-old white male who was admitted to the Maine Medical Center in February of 1969 and expired approximately 21 days later in the hospital.

His main symptoms were those of mild abdominal pain, nausea, vomiting and 40 lbs. weight loss, all of which had started about six weeks prior to admission.

Past and family histories were not contributory.

Physical examination revealed a well developed man who appeared weak. Vital signs were normal. There was a four fingerbreadths palpable liver below the right costal margin.

Chest x-ray and oral cholecystogram were negative; upper G. I. series showed a duodenal ulcer and barium enema revealed a 4 cm large filling defect in the ileocecal area; liver scan showed changes consistent with metastasis. CBC was normal and blood chemistries showed elevated bilirubin, SGOT, LDH, and alkaline phosphatase, which subsequently remained elevated. Serum calcium was 15, and phosphorus 2.8 mgs%. Six subsequent determinations showed serum calcium between 12.5 and 16.5, and serum phosphorus levels of normal range to 7 mgs%.

The patient was started on large doses of cortico-steroids on the second hospital day, but showed no improvement. In conjunction with other therapeutic trials, oral phosphate was used which failed to lower his serum calcium. He expired on the 21st hospital day with terminal renal failure, uremia, and uremic pneumonitis.

Post Mortem Examination: This revealed adenocarcinoma of ileocecal valve with massive hepatic metastasis. There were calcium precipitant in myocardium, lung, liver and kidneys. Parathyroids were normal, and there was no bony metastasis in the examined areas. Acute tubular necrosis with pulmonary congestion and edema were thought to be terminal events.

Discussion

Can a tumor "produce a parathyroid-hormone-like substance?" This question which was raised as early as 1948[8] has not yet been clearly answered. Many comments have been made to explain the mechanism of the abnormality. One should remember that the calcium and phosphorus levels might be quite variable. Hypophosphatemia found in some of the patients[8,21] is not a constant picture[10,17,30] and normal phosphate clearance has been reported[19] thus the responsible etiology may not be the same in every case.

The fact that after the extirpation of the tumor serum calcium returns to normal[12,16,17,19,21] and rises again with recurrence of the tumor, has been noted, and is in favor of the theory that the tumor is humoraly active.

In some cases of carcinoma of the lung, kidney, pancreas and colon,[22] parathyroid hormone has been identified immunologically. Also, an antigen has been found,

immunologically indistinguishable from parathyroid hormone, in an adenocarcinoma of kidney and its pulmonary metastasis.[23]

Furthermore, recent studies on tubular reabsorption of phosphate (TRP) have been carried out on 21 cases of hypercalcemia in malignancy.[20] TRP was lower than 85% in 11 and lower than 80% in 10 of the group. None of these cases responded to cortisone therapy by lowering their serum calcium. These findings favor the possibility of production of a parathyroid-like-substance by the tumor especially when parathyroid glands are normal[17,21,23] and when there is no response to parathyroidectomy.[20]

The second question would be, does the tumor produce a substance which stimulates the parathyroid glands? Association of malignancies and adenoma[24,25] or hyperplasia[26] of parathyroid glands have been observed. Extirpation of three hyperplastic parathyroid glands in a patient with carcinoma of the cervix associated with hypercalcemia caused normocalcemia.[26] Removal of a discrete parathyroid adenoma in another patient with carcinoma of the cervix[25] was followed by a return to normocalcemia. On the other hand, many cases have been reported to have either normal or regressing glands.[17,22,23,27,28,29] The coincidence of the two diseases rather than cause and effect, cannot, perhaps, be ruled out.

Production of a Vitamin D-like substance responsible for hypercalcemia is a third consideration. Occasional response to steroids[4,15,23] would support this view, but this response is partial[16] and not constant.[19,20] Recently Gordan, et al have found an osteolytic sterol in breast cancer which is chemically similar to 7-dehydrocholesterol.

Summary

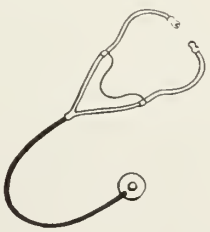
The presence of hypercalcemia in association with malignancies, but unexplained by bony metastasis, has been observed. The possible mechanisms responsible for the etiology, which may be variable and different, have been discussed. The most likely mode of action is production of a humoraly active substance by the tumor.

Acknowledgement

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Emergency Medical Services Progress Report – 1968-1969

Robert E. McAfee, M.D.*

This report is designed to inform members of the Maine Medical Association of the current activities of the Advisory Committee to the Division to Emergency Medical Services of the State Department of Health and Welfare.

Physicians appreciate the deficiencies that exist in their areas of the state as regards the ability to detect the acutely ill, to communicate with medical facilities, to administer first aid, to transport and ultimately to hospitalize persons involved in highway accidents or people stricken with acute medical emergencies. The National Highway Safety Act of 1966 has served as the stimulus for all states to survey their own problems in this field and by the offer of federal matching funds to allow the implementation of some long-needed programs to attain better patient care.

In our state, the Department of Health and Welfare has assumed the responsibility of helping to organize grants for emergency medical services to be funded through the Federal Department of Transportation. In November of 1968, a meeting was held in Augusta of the Medical Advisory Committee to the Bureau of Medical Care with additional people invited who were interested in the field of emergency medical services. As a result of this meeting, a formal Advisory Committee to the Division of Emergency Medical Services was formed. This committee consists of members from the Maine Medical Association, the Maine Osteopathic Association, the Maine Hospital Association, the State Police of the State of Maine, the Municipal Police Associations, Funeral Directors Associations as well as commercial ambulance carriers, the Maine Highway Safety Committee, Maine Highway Commission, as well as insurance company representatives. The initial meeting of this group was held in February of 1969 with all organizations represented. At that time, it was announced that a separate Division of Emergency Medical Services of the Bureau of Medical Care was formed in the Department of Health and Welfare, and that Mr. Richard Gerry was named Director, Mr. Farnham Folsom, Staff Assistant, and Mr. William Carney as Federal Technical Advisor. It was pointed out that while each of the member organizations has been active in emergency medical services in the past, the formation of this Advisory Committee would allow the joining of forces to provide a more comprehensive plan for the implementation of Emergency Medical Services in the State of Maine. Officers were elected at this meeting, and an Executive Committee was appointed.

In an attempt to allow more workable solutions to the problems assigned to the committee, five separate problem areas were identified; and separate subcommittees were appointed. A chairman was announced for each of the subcommittees and are as follows:

1. Communications Committee; Mr. Wilfred Poirier, Executive Director, Maine Hospital Association
2. Emergency Room Liaison Committee; Dr. John Shaw, Augusta General Hospital
3. Equipment and Vehicle Committee; Dr. John Konecki, St. Mary's General Hospital, Lewiston, Maine
4. Legislative Committee; Mr. Jefferson Ackor, Regional Medical Program, Augusta, Maine
5. Training Committee; Dr. Edward Morse, Knox County General Hospital, Rockland, Maine

Each of these subcommittees has been active to date in defining the problems that exist in different areas of the state and initiating plans to implement programs to solve these problems. The entire Advisory Committee has met bimonthly throughout the year and will continue to do so throughout the coming year. In addition, separate subcommittees have met; and numerous conferences have taken place between Mr. Gerry and the officers of the committees as well as the Executive Committee.

An initial grant application was submitted in March of 1969, and this has been recently approved by the Department of Transportation. The grant involves a contract by the Department of Health and Welfare with each of the five regional health planning agencies that exist in the state. The initial grant that has been approved has covered various aspects of emergency medical services including communications equipment for Aroostook Health Services Development, Inc.; Knox County General Hospital; Regional Health Agency Upper Kennebec Valley; Tri-County Health Planning Agency; a Training Program to be established under the auspices of the Bangor Regional Health Advisory Group and transportation equipment authorized to the Androscoggin County Medical Society principally for the town of Lisbon. All new requests for future grants are to be made through the Regional Health Planning Group in which an area is located, and these will be reviewed by the Advisory Committee.

In addition to this, the Maine Hospital Association has recently sponsored a state-wide consultation by the Arthur D. Little Company of Boston to evaluate and suggest improvements in State-wide Radio Communications Network. The results of this study will be available shortly. Additional information regarding continuing courses in emergency personnel training, extrication techniques and ambulance design, and recent informa-

Continued on Page XIII

*Chairman, Advisory Committee to the Division of Emergency Medical Service, Department of Health and Welfare, State of Maine, Augusta, Maine 04330.

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A small fraction of the hormonal agents in oral contraceptive pills has been identified in the milk of mothers receiving these drugs. The long-range effect on the nursing infant cannot be determined at this time.

Indication—Oral contraception.

Contraindications—Thrombophlebitis, thromboembolic disorders, cerebral apoplexy or a past history of these conditions, markedly impaired liver function, known or suspected carcinoma of the breast, known or suspected estrogen-dependent neoplasia, undiagnosed abnormal genital bleeding.

Warnings—Watch for the earliest manifestations of thrombotic disorders (thrombophlebitis, cerebrovascular disorders, pulmonary embolism, retinal thrombosis); if present or suspected discontinue the drug immediately.

British studies reported in April 1968[1,2] estimate there is a seven- to tenfold increase in mortality and morbidity due to thromboembolic diseases in women taking oral contraceptives. In these controlled retrospective studies, involving 36 reported deaths and 58 hospitalizations due to "idiopathic" thromboembolism, statistical evaluation indicated that the differences observed between users and non-users were highly significant. The conclusions reached in the studies are summarized in the table below:

Comparison of Mortality and Hospitalization Rates Due to Thromboembolic Disease in Users and Non-Users of Oral Contraceptives in Britain.

Category	Mortality Rates		Hospitalization Rates (Morbidity)
	Age 20-34	Age 35-44	Age 20-44
Users of Oral Contraceptives	1.5/100,000	3.9/100,000	47/100,000
Non-Users	0.2/100,000	0.5/100,000	5/100,000

No comparable studies are yet available in the United States. The British data, especially as they indicate the magnitude of the increased risk to the individual patient, cannot be applied directly to women in other countries in which the incidences of spontaneously occurring thromboembolic disease may differ.

Discontinue medication pending examination if there is sudden partial or complete loss of vision, or sudden onset of proptosis, diplopia or migraine. Withdraw medication if papilledema or retinal vascular lesions are found.

Since the safety of Ovulen in pregnancy has not been demonstrated, it is recommended that pregnancy be ruled out for any patient who has missed two consecutive periods before continuing the contraceptive regimen. If the patient has not adhered to the prescribed schedule the possibility of pregnancy should be considered at the first missed period.

A small fraction of the hormone agents in oral contraceptives has been identified in the milk of mothers receiving these drugs. The long-range effect on the nursing infant cannot be determined at this time.

Precautions—Pretreatment physical examination should include special reference to the breasts and pelvic organs, and a Papanicolaou smear.

Endocrine and possibly liver function tests may be affected by Ovulen. Therefore, it is recommended that such tests if abnormal be repeated after the drug has been withdrawn for two months.

Pre-existing uterine fibromyomas may increase in size under the influence of progestagen-estrogen preparations.

Because these agents may cause some degree of fluid retention, conditions which might be influenced by this factor, such as epilepsy, migraine, asthma, cardiac or renal dysfunction, require careful observation.

In breakthrough bleeding, and all irregular vaginal bleeding, consider nonfunctional causes. Adequate diagnostic measures are indicated in undiagnosed vaginal bleeding.

Carefully observe patients with a history of psychic depression and discontinue the drug if severe depression recurs.

Any possible influence of prolonged Ovulen therapy on pituitary, ovarian, adrenal, hepatic or uterine function awaits further study.

A decrease in glucose tolerance has occurred in a significant percentage of patients on oral contraceptives. The mechanism of this decrease is obscure. For this reason, diabetic patients should be observed carefully while receiving Ovulen.

Because of the effects of estrogens on epiphyseal closure Ovulen should be used judiciously in young patients in whom bone growth is not complete.

The age of the patient constitutes no absolute limiting factor, although Ovulen therapy may mask the onset of the climacteric.

The pathologist should be informed of Ovulen therapy when relevant specimens are submitted.

Adverse Reactions—A statistically significant association has been shown between use of oral contraceptives and the following serious adverse reactions: thrombophlebitis, pulmonary embolism.

Although available evidence is suggestive of an association, such a relationship has been neither confirmed nor refuted for the following serious adverse reactions: cerebrovascular accidents, neuro-ocular lesions, e.g., retinal thrombosis and optic neuritis.

The following adverse reactions are known to occur in patients receiving oral contraceptives: nausea, vomiting, gastrointestinal symptoms (such as abdominal cramps and bloating), breakthrough bleeding, spotting, change in menstrual flow, amenorrhea during and after treatment, edema, chloasma or melasma, breast changes (tenderness, enlargement, secretion), change in weight, changes in cervical erosion and cervical secretions, suppression of lactation when given immediately post partum, cholestatic jaundice, migraine, allergic rash, rise in blood pressure in susceptible individuals, mental depression.

Although the following adverse reactions have been reported in users of oral contraceptives, an association has been neither confirmed nor refuted: anovulation post treatment, premenstrual-like syndrome, changes in libido, changes in appetite, cystitis-like syndrome, headache, nervousness, dizziness, fatigue, backache, hirsutism, loss of scalp hair, erythema multiforme and nodosum, hemorrhagic eruption, itching. The following laboratory results may be altered by oral contraceptives: hepatic function: increased sulfobromophthalein and other tests; coagulation tests: increase in prothrombin, Factors VII, VIII, IX and X; thyroid function: increase in PBI and butanol extractable protein bound iodine, and decrease in T^3 uptake values; metyrapone test; pregnanediol determination.

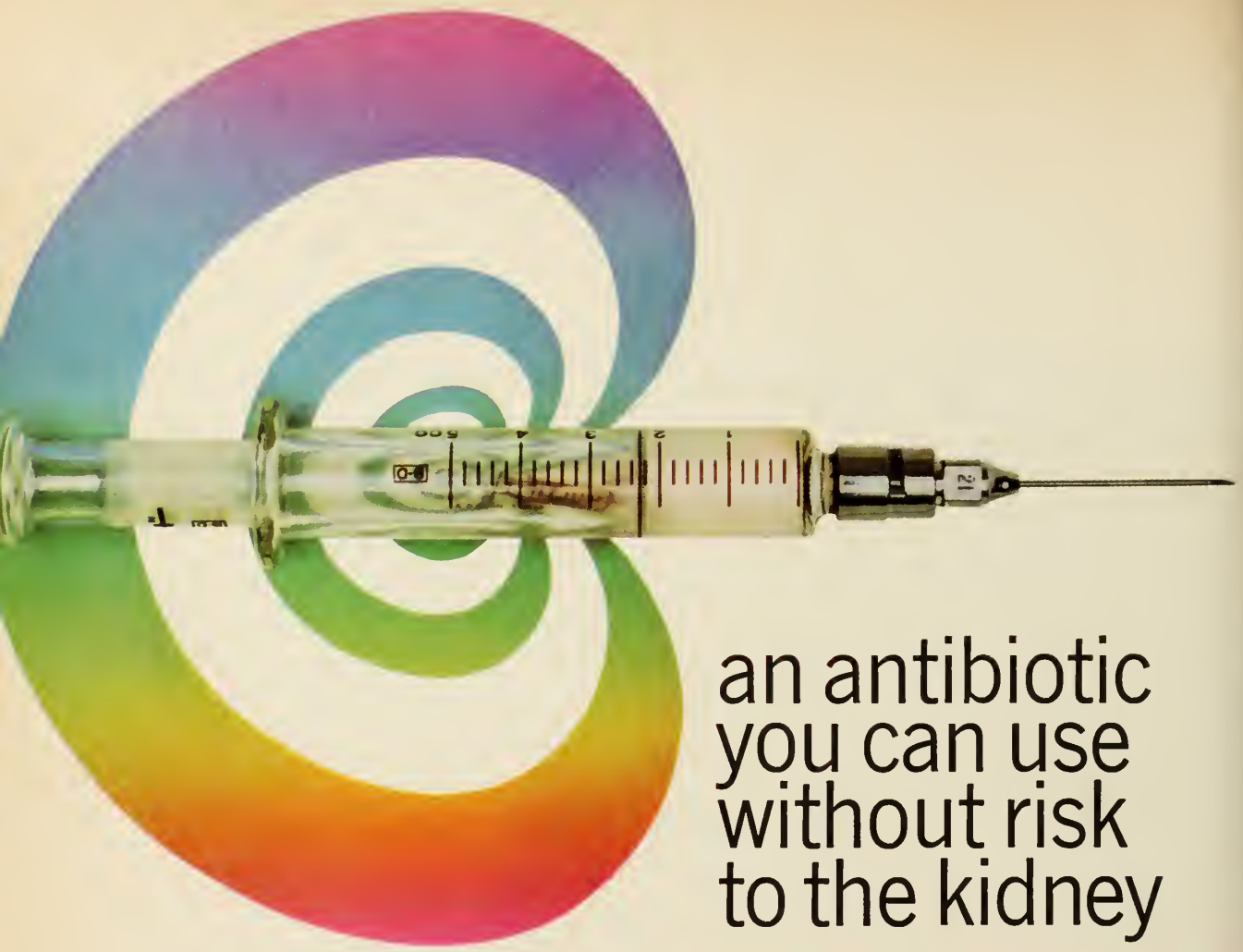


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Precautions: Typical penicillin-allergic reactions may occur, especially in hypersensitive patients. Mycotic or bacterial superinfections may occur. Experience in newborn and premature infants is limited and caution should be used in treatment, with frequent organ function evaluations. Safety for use in pregnancy is not established. In gonorrheal therapy, serologic tests for syphilis should be performed initially and monthly for 4 months. Assess renal, hepatic and hematopoietic function intermittently during long-term therapy.

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Giant Cell Arteritis of the Aorta With Dissection

Diagnosis and Management of Dissecting Aneurysms of the Aorta

A C.P.C. at the Maine Medical Center

Laban W. Leiter, M.D., Roland G. Ware, M.D., Paul R. Minton, M.D., Chris A. Lutes, M.D., Clement A. Hiebert, M.D. and Franklin F. Ferguson, M.D.

Presentation of Case

This 65-year-old white salesman had his last admission to the Maine Medical Center in November, complaining of acute onset of pain in the right temporal area, right arm, chest and right leg, with onset approximately one hour prior to admission. He had been reasonably well and working until approximately 7:30 on the morning of admission, when he had sudden onset of severe precordial chest pain, radiating from the right shoulder down the right arm, and upwards into the right neck. He became markedly weak, perspired, and returned home. During the hour required to bring him to hospital by ambulance, he continued to have severe precordial pain, radiating into the right leg, right arm, and right neck; his right arm became increasingly painful and paralyzed. P.E. on admission showed a blood pressure in the left arm of 110/70, pulse 80, respirations 50. There was absence of pulse and pain on movement of the right arm, with diminished right carotid pulsations. Heart sounds muffled. Lungs clear. Abdomen not remarkable. Good femoral and pedal pulses. Urinalysis: 0-1 RBC., 3-6 WBC., Hemoglobin 10.7 gm., hematocrit 35. WBC. 11,000; 89% polys. SMA 12/60 showed glucose 290, uric acid 8.4, B.U.N. 25, and otherwise normal (with I.V. running). EKG showed first degree A-V block, sinus bradycardia, questionable left ventricular hypertrophy, and one atrial premature beat. Portable A.P. and P.A. chest films suggested slightly indistinct borders of the thoracic aorta. The patient was taken immediately to Special Care and arrangements were being made for the O.R., when the patient had a cardiac arrest after the chest films, and was unable to be resuscitated, approximately 1½ hours after admission.

More complete information about this patient was obtained from his last hospital admission 5 months previously. Past history included herniorrhaphy and appendectomy as a young man. Admission 10 years ago for study of recurrent right-sided "tension" headaches, occurring usually at 2-3 A.M., not associated with nausea or vomiting, and no tenderness over the temporal artery. X-ray at that time revealed a moderate-sized hiatal hernia. Other admissions included TUR for benign prostatic hypertrophy four years ago, right ureteral colic 3 years ago. Two years ago he was hospitalized for right upper anterior chest pain and pressure sensation in the precordium and substernal region, with questionable diagnosis of coronary artery insufficiency. Ten months ago, following an automobile accident, he developed headaches particularly involving the occiput, and the muscles of the neck, waking him up at night, and gradually developed nausea and anorexia and vomiting. Headache varied at times, being fronto-temporal. He was treated with antiemetics, analgesics and sedatives, after orthopedic and neurologic consultations who agreed that he had a fairly classic neck strain resulting from the rear-end auto collison, with "pinched nerves." There was no evidence of increased intracranial pressure. X-rays showed joint disease at the level of C4-C6, and skull X-rays were interpreted as normal. He had some improvement until 5 months ago, when he entered the hospital again because of continuing headaches, pounding and severe, involving either temporal artery and occipital area of the head. P.E. at that time: B.P. 132/78, pulse 82, respirations 18. Moderately well-developed, well-nourished male, in acute distress, with occipital and right fronto-temporal headache. No lacerations or ecchymoses of the head, but over the right temporal artery moderate tenderness to palpation, without redness, swelling or heat. Considerable tenderness over the right trapezius muscle, otherwise flexion, extension and lateral motions in all extremities. Pupils equal, responding to light and accommodation. Lungs clear. Heart not enlarged. Normal sinus rhythm. Grade II-III systolic blowing murmur at the apex, not transmitted. Abdomen normal except for small right and left indirect hernia. Genitalia: Normal. EEG abnormal, especially in the left side temporally. Brain scan negative. Serologic test for syphilis negative. L.E. prep negative. Serum agarose electrophoresis – normal. Biopsy of the right temporal artery showed subintimal fibrosis and chronic inflammation, with fibrinoid necrosis of the media. Pain over the right temporal artery fluctuated, and 10 days after operation he was discharged to continue out-patient physiotherapy to his neck. On this regime, he was reasonably well until his final admission.

Discussion of Clinical Diagnosis

Dr. Laban W. Leiter. Initial reading of this case history leaves little doubt about the cause of death – one would be hard pressed to find any diagnosis other than dissecting aneurysm. Accordingly the challenge seems to lie in determining the etiology or major contributing factor of the dissection. However, let us first focus on the terminal episode, and consider some of the pertinent background features of dissecting aneurysm.

Dramatic and catastrophic are the adjectives commonly used in describing the chain of events of dissecting aneurysm and certainly apply to this case. The symptom complex is commonly one of abrupt onset of chest pain, anterior and posterior, with the pain radiating to the neck, down one or both arms, to the lower back and lower extremities with associated sweating and pallor.

A most comprehensive review of dissecting aneurysm is that of Hirst[1] and others in which they compiled and anlayzed all the cases and studies in the English literature to that time. An incidence of 1-4% of some form of aneurysm in all autopsies was observed, and dissecting aneurysms comprised 12-25% of the total; combined totals indicated that dissecting aneurysm occurred in one of every ten thousand seven hundred and fifty-six hospital admissions, and an average of one of every three hundred and sixty-three autopsies. A good three-fourths or more of dissecting aneurysms occurred in the 40-70 age range but also reported to occur in all age groups; males predominate 2-3 times to one. No racial or occupational predilection has been observed.

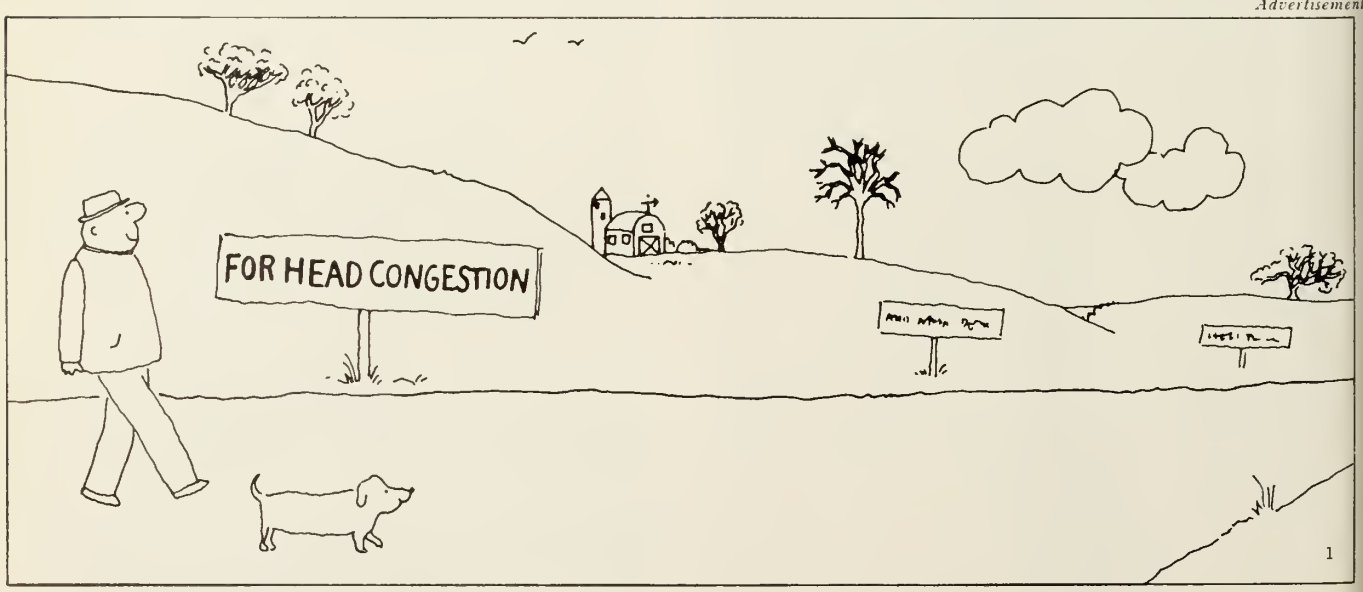
The underlying lesion and pathogenesis of dissecting aneurysm is one of medial degeneration (most commonly of the cystic medionecrosis type but also with various degeneration of combination of elastic and muscle tissues in the media) and associated rupture of vaso vasorum into the lesion or intimal tear over the lesion initiating the dissection allowing the jet stream of blood from the lumen of the aorta to dissect longitudinally and to a lesser extent circumferentially. In about 75%, the intimal lesion or tear occurs in the root of the aorta. About half of all cases dissect the length of the aorta and are the Type I of DeBakey; Type III are those with the intimal tear occurring beyond the left subclavian artery and the medial cleavage extending distally; and Type II (most common type in Marfan's syndrome) are limited to the area proximal to the left subclavian artery.

In our patient, one can make a strong case for the dissection beginning in the base of the aorta, extending to the arch around the innominate and up the right common carotid occluding the right subclavian and narrowing the right carotid; the medial cleavage continuing distally to involve the right iliac. However, the femoral pulses were not compromised so the right leg pain may have been a result of ischemic changes of the cord or occlusion of the lumbars and nutrient arteries to the sacral plexus. There was a brief respite before the medial cleavage began again, this time moving proximally and into the pericardial sac resulting in tamponade and death. About 70% of the acute cases die as result of rupture into the pericardium.

Clinical features can of course be protean, depending on the extent of dissection and the degree of involvement of branches. In addition to the pain complex, the most common clinical features are absence of pulse in extremities or carotids, aortic diastolic murmur not present before, paradoxical pulse, shock, pallor, tachypnea, and widening of the mediastinum. If the pain is limited to the chest or if the pain is absent (reported as high as 50% in one small series and 20% in the large series of Hirst), the diagnosis is of course difficult. X-ray findings both with the conventional views and with contrast media can then be of great help and Dr. Ware will here discuss this aspect and the films of our present case.

Dr. Roland G. Ware. Review of the patient's previous films indicates that since 1962 there has been increasing prominence of the left ventricular contour and the appearance of slight dilatation and moderate unfolding of the thoracic aorta. A supine portable chest film taken on the morning of the final admission shows clear

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lungs and pleural spaces and no change in the appearance of the heart and aorta since the study of four months before. This is not in any way inconsistent with the diagnosis of a dissection of the thoracic aorta, because the false lumen may expand into space previously occupied by the true lumen rather than bulging the outer contour of the aorta. Therefore, although aortic dissections usually do produce contour changes in the aorta, they may not. It is in part for this reason that the radiological documentation of an aortic dissection is an angiographic task.

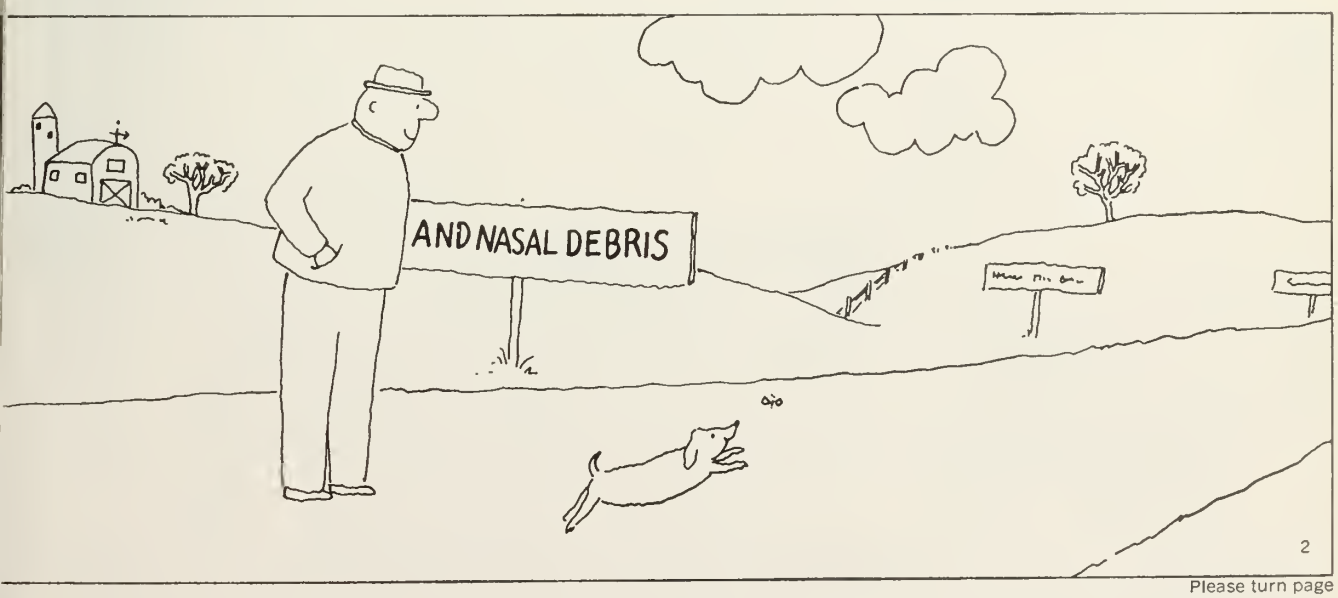
Since the diagnosis of an aortic dissection can usually be made clinically, an angiogram to establish the diagnosis is necessary only where the diagnosis remains obscure because of atypical clinical features. But for purposes of surgery a very detailed definition of the aortic dissection is mandatory, so that both the true and false lumina are opacified and the septum between them identified. This information must indicate not only the extent of the dissection but also the site of the primary intimal tear.

In general, there are two angiographic approaches to aortic dissections. The first involves the injection of a fairly large bolus of contrast medium on the right side of the pulmonary circulation into the superior vena cava, the right atrium or the pulmonary artery, and filming the thoracic aorta when the contrast is passing through it. This has the disadvantage of dilution of the contrast medium by the time it reaches the aorta, and this dilution may be considerable if the patient is in congestive heart failure or has aortic insufficiency. But it avoids the potential hazard of introducing catheters directly into the diseased aorta where there is the ever-present danger of making a pressure injection with the tip of the catheter in the false lumen. However, proponents of this second approach which involves the catherization of the aorta either via a femoral artery or an axillary artery cite the increased opacification, and hence the improved detail, which is obtained and feel that careful attention to the technique of the catheterization will avoid injection into the false passage wih extension of the dissection or perforation of the aorta. But in the majority of cases first method will provide the needed information.[2]

DR. LEITER: To return now to the etiology, one of four major contributing factors is often present in dissecting aneurysm – 1. Hypertension. 2. Heritable disorders of connective tissue. 3. Congenital cardiovascular disease. 4. Pregnancy. In Hirst's combined series fifteen cases occurred during pregnancy – but three of these had coarctation of the aorta and one had Marfan's syndrome. Of congenital cardiovascular diseases, coarctation terminates in dissecting aneurysm in 20%; bicuspid aortic valves and aortic hypoplasia predispose to dissecting aneurysm, and in Hirst's compilation there were a total of 16 cases of congenital disease – 11 were coarctations and five bicuspid aortic valves. Our patient's sex and age enable us to rule out factors 3 and 4.

Heritable disorders of connective tissue accounted for 13 cases in the total 505 cases reviewed by Hirst. Most of these are of the Marfan syndrome, but McKusick[3] reports 3 cases of dissecting aneurysm in the Ehlers Danlos syndrome. No features mentioned in the protocol lend support to this etiology, and again the age of the patient is against the connective tissue disorders. However, the presence of hernias – inguinal and hiatus – is suggestive, since hernias are common in Marfan syndrome, and moreover McKusick does report one patient with Marfan syndrome with dissecting aneurysm at the age of 59, and one case living to the age of 73 without apparent involvement, though, of the aorta.

Hypertension is reported to be present in about 90% of all patients with aneurysm either by history or by evidence of left ventricular hypertrophy by EKG or



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x-ray or at post. We are told the EKG showed questionable left ventricular hypertrophy but the blood pressure on previous hospitalizations was apparently normal and it does not appear that hypertension was a significant factor in this patient's dissecting aneurysm.

What other etiologic factors are known to be associated with dissecting aneurysm? In Hirst's review listed as factors of dubious significance are the following:

1. Lesions of the vasa vasorum (could cause the medial lesion)
2. Arteriosclerosis (but placques are intimal and dissection when it does occur usually is short and asymptomatic).
3. Syphilis (rarely associated with dissection and indeed may protect against dissecting since lesions heal transversely).
4. Endocrine diseases (Cushings, myxedema, and hyperparathyroidism – but probably associated by way of hypertension).
5. Infections and intoxications (focal arterial necrosis may occur in septicemia; toxins such as nicotine and epinephrine have been suggested as cause of medial lesions occasionally).
6. Dietary (lathyrism and d-1 methionine – have been responsible experimentally and in animals for dissecting lesions of the aorta but probably not in humans).
7. Trauma (rarely but may be an initiating factor).

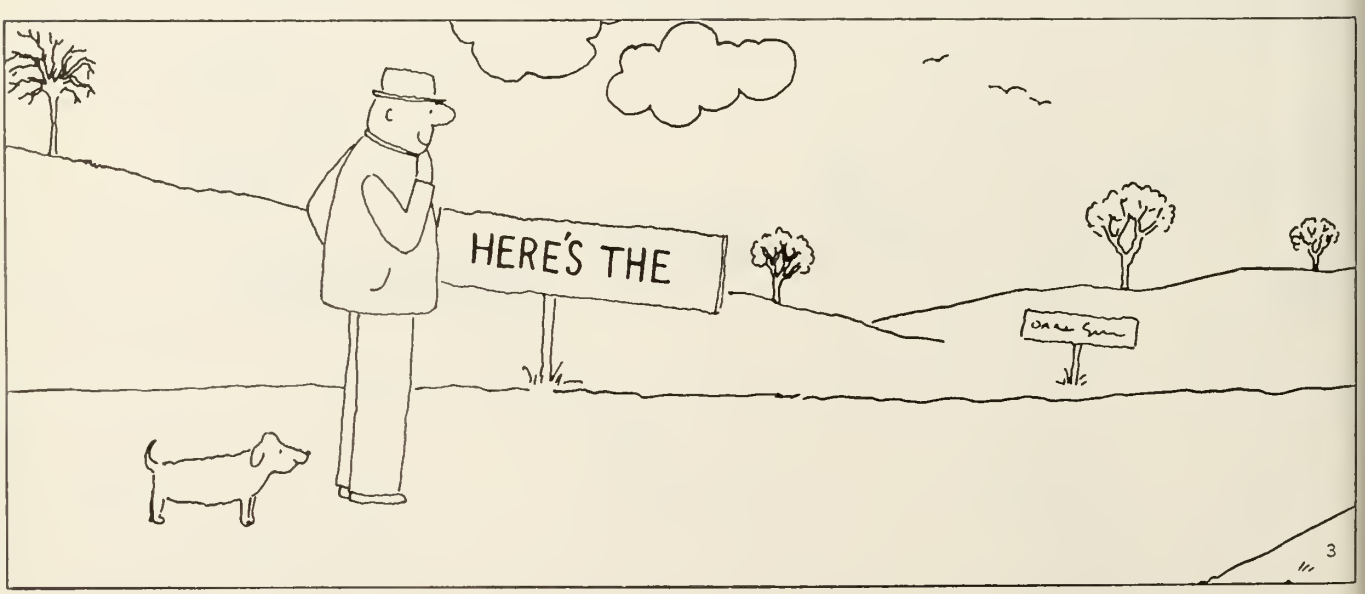
To this list we might add vasculitis, especially necrotizing angiitis, and in the detailed report compiled by Hirst there did appear one case of granulomatous giant cell aortitis with dissecting aneurysm.

Returning now to the case presentation, the events of the last 10 months take on new interest. The diagnosis of temporal arteritis is well established and the propriety of the more inclusive terminology – cranial arteritis –underscored by virtue of the diffuse headaches and the abnormal EEG indicating intracranial involvement as well.

Could the cranial arteritis be the underlying cause of the dissecting aneurysm?

In preparing this discussion after reviewing the pathogenesis and etiologic factors it seemed that in theory any vasculitis might be responsible for dissecting aneurysm, either by virtue of small vessel involvement, that is the vaso vasorum, this inducing an area of medial degeneration, or by actual focal involvement of the media by inflammatory or necrotizing lesion. This concept seemed the more exciting when the one case of giant cell aortitis in Hirst's series was observed; but it was not reassuring to find no other cases, especially in the light of the large number of studies rampant in today's literature of vasculitides and immunologic disorders. Further indirect relationship was suggested in reviewing the section on polyarteritis by Shulman and Harvey[4] in Hollander's *Arthritis* – included in the variants of polyarteritis were cranial arteritis and aortic arch syndrome. Moreover, the review by Ross and McKusick[5] of aortic arch syndrome indicated among the etiologies healed dissecting aneurysm and arteritis.

In short then, there appeared to be ample theoretic support of the concept of arteritis causing dissecting aneurysm but a dearth of case reports. To lend support though to this thesis and appearing as manna from heaven was the find of an article in the British Medical Journal of 1960 by Paulley and Hughes[6] being a report of giant cell arteritis with 76 cases seen by them in a period of six years. They point out that "giant cell arteritis, once believed to run a benign course, kills or maims a number of those afflicted and when in remission it may only sleep." They review the many different manifestations including the absence of temporal artery involvement and stress the importance of adequate and prolonged steroid therapy in this potentially fatal illness. Included in one of their case reports was a 70-year-old female,



who developed a dissecting aneurysm. Another report of temporal arteritis and renal failure[7] in which classic lesions of the renal arteries were shown gave further support to the concept that cranial arteritis was indeed apt to spread beyond the head and could involve the aorta as well as medium to small arteries.

And so it seemed reasonable for me to conclude that this case of dissecting aneurysm was a result of giant cell arteritis involving either the vaso vasorum or the media per se with the granulomatous lesion, which paved the way for the fulminating final illness.

My preparation for this presentation was helped by two fortuitous circumstances – first, the current issue of Modern Concepts of Cardiovascular Disease[8] is devoted to the therapeutic aspects of dissecting aneurysms and secondly, just the week before this Conference the Cardiology Section of our hospital discussed a case of dissecting aneurysm at their regular Friday Conference – and I was able to sneak away from my office long enough to hear some of the material presented there. Especially impressive were the reports of therapy, medical and surgical, and I asked Dr. Ferguson before this Conference if we could allow a few minutes after his discussion and summation for reports by Drs. Minton, Lutes and Hiebert on this important aspect of dissecting aneurysmal disease of the aorta.

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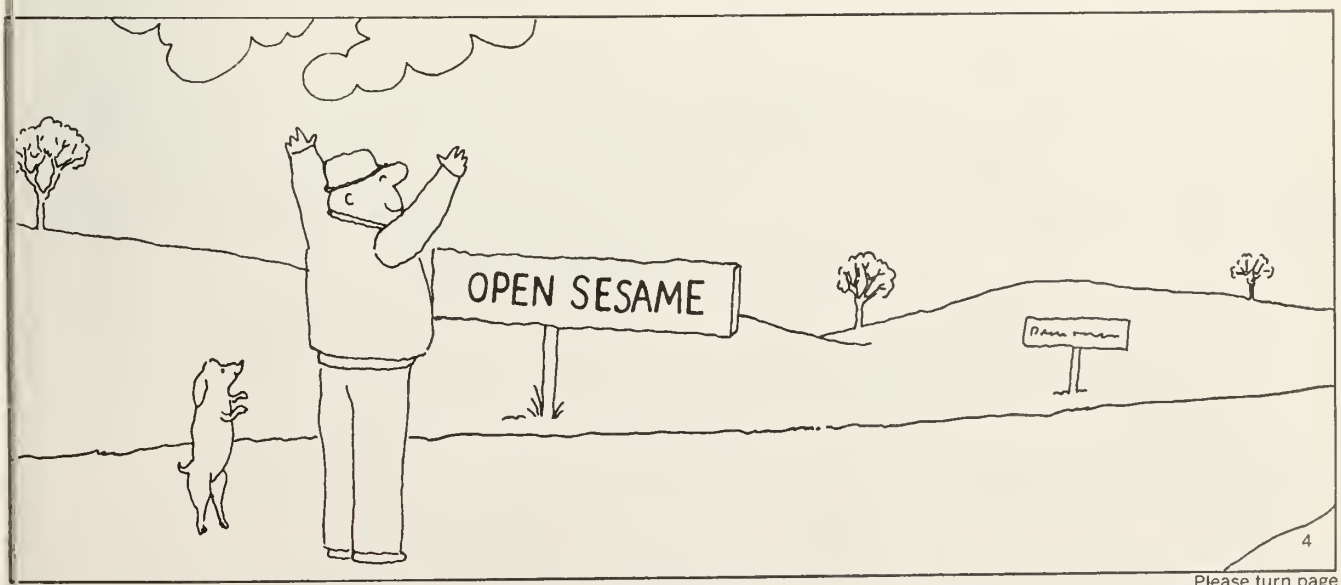
Dissecting Aneurysm by Dr. Paul Minton: Until recently, acute dissecting aneurysm of the aorta had been considered a surgical emergency with a high mortality rate even in experienced hands. Although DeBakey and his colleagues[1,2] have achieved a remarkable survival rate of almost 80% in a series of 179 patients, most surgical groups have had survival rates of less than 50%.[2–6] Furthermore, most of these surgically treated patients have not had acute dissecting aneurysms and most have had aneurysms distal to the left subclavian artery and consequently, most accessible to surgical repair.

Since 1965, a new approach, using drug therapy, has been evolved by Wheat and Palmer and their associates[7,8] resulting in a survival rate from acute dissecting aneurysms, involving all segments of the aorta, of 80 to 95%. The rationale for drug therapy is based on the following:

1. Only 3% of patients with untreated acute dissecting aneurysms die immediately; 21% die within 24 hours; 60% within 2 weeks, and 90% within 3 months.[9]
2. The principal cause of death is not the initial tear but an extension of the dissection resulting in rupture of the aorta and death due to hemorrhage or cardiac tamponade.
3. Acute dissecting aneurysms can heal and recanalize[10,11]

Accordingly, if the patient is seen within the first 24 hours and if the progression of the dissection is aborted, the disrupted tissues could heal and the dissection resolve in a large number of these patients.

The major force producing extension of dissection has



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been shown to involve the pulsatile nature of blood flow in large vessels. Experimental evidence from artificial and biological systems has supported this: Pulsatile flows cause disruption and dissection of rubber cement linings in plastic tygon tubes and of the intimas in aortas of dogs, whereas laminar flows do not.[5,2] Turkeys treated with Beta Aminoproprionitrile have a high incidence of aortic dissection; this can be prevented by administration of Reserpine® or Propranolol which modify the quality of pulsatile flow by decreasing the slope of the aortic pulse wave without affecting pulse rate or mean aortic pressure.[13] By modifying the quality of pulsatile blood flow in patients with acute dissecting aneurysms, Wheat and Palmer[7,8] found that the acute situation could be stabilized and the patients treated with continuous drug therapy or elective surgical correction, at another institution if necessary. Their regimen is applicable to patients hospitalized at any hospital with an intensive care facility.

From their experience, Wheat and Palmer[7,8] developed the following routine of therapy:

1. All patients with the tentative diagnosis of dissecting aneurysms are admitted immediately to an intensive care unit.
2. Appropriate diagnostic studies are carried out to confirm or exclude acute myocardial infarction since this is the most important differential diagnosis.
3. Continuous monitoring of ECG, blood pressure, urine output, (through a foley catheter) and stools for occult blood, is instituted.
4. The systolic blood pressure is reduced to 100 to 120 mm.Hg. by an intravenous drip of Trimethaphan (Arfonad®), 1 to 2 mg. per ml., as necessary to control blood pressure, for 24 to 48 hours.
5. Reserpine, 1 to 2 mg, or Propranolol, 1 mg., is administered IM every 4 to 6 hours.
6. Guanethidine, 25 to 50 mg. is given orally twice daily.
7. Daily chest films for mediastinal widening or pleural fluid are taken.

Simultaneous administration of Reserpine or Propanolol and Guanethidine with Trimethaphan is important because many patients become refractory to the hypotensive action of Trimethaphan within 24 to 48 hours. The status of the sensorium and the urinary output are used as guides to the appropriate blood pressure levels necessary. A systolic level of 100 to 120 mm.Hg. is preferred, but in aged patients a higher range may be necessary to insure adequate perfusion of the brain and kidneys. In other patients, it may be necessary to lower the pressure to 75 to 80 mm.Hg. to relieve pain, provided adequate urinary output (25-30 ml. per hour) is maintained. Generally when the blood pressure is lowered the excruciating pain of dissection is relieved remarkably and relief of pain is an important indication of the efficacy of drug therapy. If the patient is not hypertensive, the regimen is the same except Trimethaphan and often Guanethidine are omitted.

Significant side effects of drug therapy must be anticipated. Trimethaphan may produce marked hypotension with cerebral, renal or myocardial ischemia and acute ganglionic blockade may produce ileus, bladder distention or visual disturbances. Reserpine may produce depression and is a potent stimulator of gastric secretion with resultant peptic ulcer with bleeding. Propranolol may produce manifest congestive heart failure in patients with borderline compensation and is contraindicated in asthmatics. Guanethidine may produce severe postural hypotension and diarrhea and the dosage must be carefully adjusted when the patient is ambulatory.

An aortogram to confirm the diagnosis and extent of the dissection is recommended before the patient is discharged or the patient may be transferred to an appro-



priate facility for this if he is sufficiently stable. If the patient is stable and the clinical diagnosis reasonably certain, aortography is usually performed after 7 or 10 days. However, if the diagnosis is not clear, aortography is indicated as soon as possible after admission as the patient's condition permits.[7,8]

As the patient's condition stablizes and the Trimethaphan discontinued, the patient may be transferred to a general care ward for regulation of the ultimate drug regimen and for progressive increase in activity. Generally at discharge, which is not unusual within 2 to 3 weeks in an uncomplicated response to this type of treatment, a systolic blood pressure of not over 130 mm.Hg. is recommended. The drug regimen should include a minimum of 0.5 mg. Reserpine or 60 mg. Propranolol per day and sufficient Guanethidine or other agent or combination of agents to control the systolic pressure within the desired range.

During the acute phase, the indications for immediate surgical intervention are[7,8]:

1. Uncontrolled aortic valve regurgitation (due to dissection retrograde to the aortic root).
2. Inability to control blood pressure elevation or pain within 4 hours.
3. Evidence of continued extension or enlargement of the dissection.
4. Occlusion of a major branch of the aorta.
5. Impending rupture of leakage of the aneurysm.

After recovery from the acute episode, the patient is observed closely at intervals of 1 to 3 months. The patient is checked for pain, status of peripheral pulses and murmurs, cardiac murmurs, and blood pressure levels. Chest films are obtained at each visit to compare the size of the aorta and to determine whether any saccular aneurysm is developing. In the chronic phase, recurrence of the dissection is usually heralded by chest pain or enlargement of the aneurysm on chest film. Indications for surgical correction during the chronic phase are[7,8]: Progressive aortic valve regurgitation or the development of a saccular aneurysm.

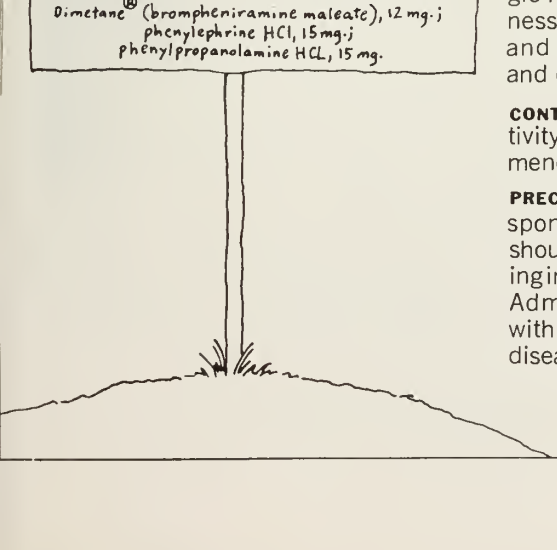
Summary

Wheat, Palmer and associates[7,8] have developed an approach to the treatment of acute dissecting aneurysm of the aorta that has radically improved survival rates over surgical treatment to almost 90%. Their plan involves close observation of the patient and administration of potent ganglionic blocking agents to lower the blood pressure and administration of Reserpine or Propranolol to modify the quality of pulsatile flow through the aorta. This approach permits any hospital with a facility for constant observation of patients to treat acute dissecting aneurysms with drugs and anticipate recovery in the vast majority of cases.

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Dr. Chris A. Lutes: Dissecting aneurysms have been and still are extremely difficult surgical problems to deal with. Only since the advent of extracorporeal circulation has it been feasible to attempt surgical intervention and even with this technique the results have not been particularly rewarding.

In the thoraco-abdominal aorta the most common site for a tear, is in the ascending aorta just above the valve, or just distal to the left subclavian artery. These two points are areas of relative fixation and it is thought this plays some role in the origin of dissection at these locations.

Tears in the proximal or ascending aorta will commonly dissect up the major arch vessels and extend a variable distance down the thoracic and abdominal aorta and sometimes into the iliac vessels. A tear just above the valve will commonly produce aortic insufficiency due to loss of support of the aortic valve cusps. And, of course, a proximal dissection into the pericardium will produce acute cardiac tamponade, the most common cause of demise with dissecting aneurysms. Dissections in the ascending aorta require complete extracorporeal circulation and cardiopulmonary bypass, with some provision for perfusing the coronary arteries. In some cases, damage to the valve requires valve replacement, but more commonly, repair of the tear or replacement of the ascending aorta with a graft corrects the aortic insufficiency valve support and a valve prosthesis is not necessary.

A dissection starting in the aorta distal to the left subclavian artery and extending down to the iliac vessels carries the best prognosis since complete cardiopulmonary bypass is not necessary and the repair is technically easier to perform. Left heart bypass is used which allows the left ventricle to continue maintaining a portion of the cardiac output and provides a more physiologic perfusion of the coronary arteries. Repair of this tear requires a left thoracotomy rather than the anterior approach which would be used for tears originating in the ascending aorta. The difference in surgical approach makes it mandatory to have preoperative angiographic identification of the intimal tear. Without surgical closure of the tear at its origin, continued or recurrent fatal dissection will occur.

A tear just above the aortic valve may be surgically repaired without replacing the aortic valve or the ascending aorta, if the false lumen is obliterated with a continuous buttressed suture, and the aorta then re-approximated to restore continuity with the true lumen.

The surgical technique used with a tear in the descending aorta by using left heart bypass, the damaged portion of the aorta including the intimal tear is excised and the aorta replaced with a teflon graft. Until recently, the accepted technique for management of dissection aneurysms was to perform a fenestration procedure. This means that a re-entry site from the false lumen is surgically created, usually in the descending aorta when a double lumen extends that far. The aorta is transected and the distal two layers reconstituted to one layer with a continuous suture. The proximal cut edges of the double lumen are identified and a portion of the false lumen wall formed by the true intima is excised allowing re-entry of blood into the aorta. Aortic continuity is then re-constituted by sewing the proximal and distal cut edges of the aorta together. Theoretically this prevents further distal dissection, however, as stated earlier, retrograde dissection from the original intimal tear site is still possible and ultimately is the cause of death in most of the patients due to cardiac tamponade.

A series of cases at the Massachusetts General Hospital shows that the survival rate in patients who received no surgical therapy was about 15% at the end of one year, and in patients who underwent a fenestration procedure, the survival rate was the same. For this reason, the fenestration procedure has been abandoned. It also shows that with the other forms of therapy mentioned, survival rate at the end of one year can be increased in selected cases to between 60 and 75% depending on the location of the tear.

More recently the results of Dr. Myron C. Wheat, Jr. in Florida using purely medical therapy have been most encouraging. With aggressive antihypertensive medical therapy, survival rates with selected patients may be as good as with surgical therapy and the rational behind it.

Dr. Clement A. Hiebert: This has been a festival fortnight of discussions on acute dissecting aneurysms of the aorta. Last Friday, this topic was neatly reviewed at the weekly Cardiology Conference of the Maine Medical Center by several of this evening's speakers. A week ago last Monday, at the American Association for Thoracic Surgery Meeting in San Francisco, a paper was presented by M. W. Wheat of the University of Florida College of Medicine in Gainsville, reviewing the therapy and results of 54 patients with acute dissecting aneurysms of the aorta seen over a four and one-half year period. Clearly, the topic is timely.

Some figures from Dr. Wheat's paper are very much to the point of tonight's discussion. Because of a previous mortality rate approaching 100% with surgery, intensive treatment aimed at lowering the blood pressure was instituted as the prime method of treatment of dissecting aneurysms about five years ago. The first six patients lived, and since then, the over-all series of 42 patients so treated had the incredible survival rate of 90%.

Forty-eight percent of these patients were seen within 24 hours, 90% within one week, and all within two weeks of the onset of symptoms. These results are far better than any surgeon can hope to achieve. I, therefore, find myself in the unusual position of suggesting that we all look at dissecting aneurysms as something besides a plumbing catastrophe and reserve surgery for the following situations:

1. Development of overwhelming aortic valve insufficiency.
2. Failure of drug therapy to halt the progression of the dissection.
3. Leaking of the aneurysm – that is, extravascular dissection of blood.

Ischemic limbs and paraplegia are not regarded as contra-indications to drug treatment. Most diseases have specific indications for surgery and we are now, at last, getting some guidelines for the management of acute dissecting aneurysms of the aorta.

Pathological Discussion

Dr. Franklin F. Ferguson: The gross anatomic diagnoses in this case included:

1. Dissecting thoraco-abdominal aortic aneurysm, with cardiac tamponade.
2. Arteriosclerotic cardiovascular disease, with thrombotic occlusion of right coronary artery.
3. Esophageal hiatal hernia.
4. Status post biopsy of temporal arteritis.
5. Status post transurethral resection, with bladder neck hypertrophy.

On opening the pericardial cavity, it was dilated and appeared dark through the membrane, and contained approximately 300 cc. of clotted blood. The aorta was found to be involved by a dissecting aneurysm, which involved various fractions of the aortic circumference, from a maximum of 140° at the aortic root, to a minimum of about 10° in the distal aorta. Dissection was felt to originate approximately 8 cm. proximal to the celiac axis, and the false lumen created communicated proximally to the intrapericardial aorta, where there was extensive hematoma and a small perforation in the posterior aspect of the aortic loop, which led to the cardiac tamponade. Also proximally it extended into the innominate and left subclavian arteries, and distally into both common iliacs, both renal and superior mesenteric arteries, but no dissection was found in the left carotid or inferior mesenteric arteries or celiac axis. The heart in addition showed occlusion of the right coronary artery in its proximal portion by a firm thrombus. Sections of the aorta in some areas showed a split in the media, consistent with the grossly-diagnosed dissecting aneurysm. In addition, however, there was the finding of a dense lymphocytic infiltrate into the media, with degeneration of the media and the formation of several giant cells Fig. 1. Special stains for spirochetes were negative. A comparison with the previous biopsy of the temporal artery showed a similar change in that vessel as well Fig. 2.

The presence of giant cell arteritis involving the aorta and other major vessels has been increasingly reported, in conjunction with cases[9,10,11] showing changes of temporal arteritis. These have been reported under a variety of terms, including giant cell arteritis, polymyalgia rheumatica, polymyalgia arteritica, and Takayasu's disease. It is the impression of several of the authors that giant cell arteritis is a fairly common disease, which is frequently overlooked. B. Hamrin and Nils Jonsson of Lund, Sweden,[12] reporting in the "Lancet" studied 52 patients with polymyalgia arteritica, which they had followed for four years. They were able to demonstrate murmurs suggesting a disseminated vascular process, heard over the large arteries in 30 of these patients. Angiography which was performed in 5 cases revealed stenosis at the site of these murmurs in all cases. In several of the patients both temporal arteries had ceased to pulsate, and it was their feeling that these findings, plus the microscopic changes in the arteries, strongly suggested the underlying cause of polymyalgic syndromes in a disseminated giant cell arteritis. The occurrence of a dissecting aneurysm as seen in our case, in cases of giant cell arteritis, is distinctly uncommon, but may occur.[14] Abnormally high fibrinogen and alpha 2 globulin values are frequently reported, and most cases have responded well to steroid therapy.

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Immunologic Experience at Men's Correctional Center

Sidney R. Branson, M.D. and Everett A. Bent,
CWO, Med. Corps, USA, (Ret.)

In June 1966, at the suggestion of Commissioner William E. Schumacher and Superintendent Merton R. Johnson, a comprehensive diagnostic and immunologic program was conducted at the Men's Correctional Center in South Windham, Maine. In addition to initial physical exam and VDRL, the following procedures were administered to each new inmate:

1. Smallpox Vaccination
2. TB Tine Test
3. Tetanus Toxoid immunization
4. Influenza Vaccine immunization
5. Oral Polio immunization

This paper will present the performance and results of these procedures and the conclusion to be drawn from 481 admissions between June 17, 1966 and December 31, 1967.

The age level of inmates ranged from sixteen to thirty-five years with the majority in the early twenties; approximately 90% native born in the State of Maine.

Of special interest is the relatively large group of successful "takes" among those vaccinated against smallpox; the tuberculin reactors; the rural or urban background of the subject, its influence on the results; and the safety of multiple tetanus toxoid injections.

Smallpox Vaccination

	Total	*Non Reactors*	*Positive "Takes"*	*Urban Origin*	*Rural Origin*
Number	481	381	100	50	50
Percentage	100%	80%	20%	10%	10%

It would seem that 20% of a group of young adults had lost immunity to smallpox which had been granted them as infants or pre-school children; and that this was a fairly representative group half urban and half rural; then it behooves physicians and public health officers to offer vaccination more frequently. We saw no ill effects or any serious complications among those successfully vaccinated.

Tuberculin Tests

	Total	*Non Reactors*	*Positive Reactors*	*Urban Origin*	*Rural Origin*
Number	481	448	33	16	17
Percentage	100%	91%	9%	4.5%	4.7%

Among our positive reactors about 15% gave a family history of Tuberculosis, although they all denied having been themselves ill with TB. Thirty-one had regular chest x-rays; but evidence of old childhood type TB showed up in only five cases on x-ray. One of the positive reactors developed acute spontaneous pneumothorax and was diagnosed as active tuberculosis without x-ray evidence of a pulmonary lesion. He has done well on Isoniazid therapy. Again the question of urban or rural origin did not seem to be a factor.

Tetanus Toxoid

All the men in the series received two ½ cc doses of Tetanus Toxoid six weeks apart. A fair number have served in the armed forces and probably were immunized on induction. Certainly the great majority also received toxoid during infancy and childhood – yet we had no serious reactions in the group – very rarely – an erythematous hot area at the site of innoculation twenty-four hours later which always subsided in a short period of time. Therefore, some doubt exists regarding the warnings on "overkilling with Tetanus Toxoid." From the exposure of this program, the administration of Tetanus Toxoid booster doses appears to be a safe procedure. Its use in conjunction with human serum is reasonable.

As for influenza innoculations, we believe they have value in reducing the number of cases of the disease. It seems to have been effective during the last two winters in this institution. We have had very few influenza cases among either the officers of the inmates, far less than appeared in the general population at the time.

Thorough physical examinations produced good results especially in detecting correctable defects, pilonidal cysts, hernias, back problems, epilepsy, enuresis, allergy and chronic skin conditions. Two men were sent to the Maine Medical Center for removal of tattoo; one because he developed allergy to the inks used; another for removal of swastika design which the subject himself had begun to despise.

Conclusions

There are no substitutes for thorough physical examinations and adequate immunization schedules in the practice of medicine in the institutional setting or private practice.

Complications arising from tetanus toxoid injections and smallpox vaccinations are extremely rare and relatively mild. These procedures should be done on adults at least every five years. Influenza vaccine may have merit.

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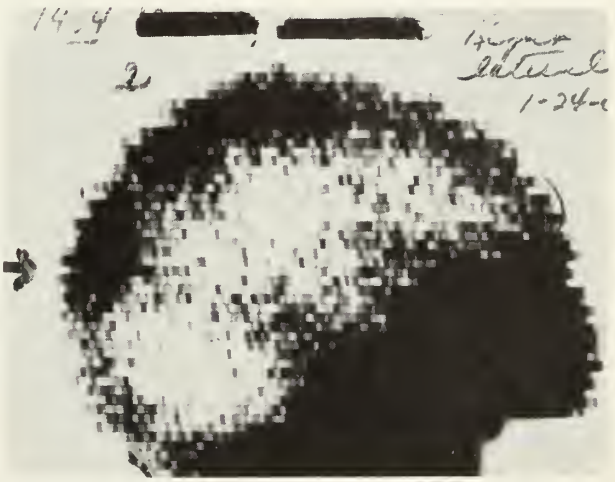
X-Ray Of The Month*

This patient is a new born girl with a large head and full fontanelle. As part of the work-up a brain scan was done.

The Dandy-Walker Syndrome

The Dandy-Walker Syndrome is an anomaly of the cerebellum characterized by hydrocephalus and gross dilatation of the fourth ventricle. The roof of the fourth ventricle consists of an ependyma-lined membrane with total, partial or no occlusion of the foramina of Magendie and Luschka. The anterior vermis may be incomplete and is usually displaced over the quadrigeminal plate. The posterior vermis is also underdeveloped and is continuous caudally with this same membrane which replaces the normal posterior medullary velum.[1] Because this dilatation of the fourth ventricle occurs during fetal life it prevents the normal descent of the tentorium, straight sinus and torcular. A characteristic finding then in those cases studied by angiography has been an abnormally high position of the torcular and transverse sinuses. Related to this has been described an elongation of the Vein of Galen and high position of the straight sinus.[2]

A recent case at this hospital showed characteristic changes by ventriculography and angiography. A 99m Te brain scan was also performed and showed very clearly (arrow) the abnormal high position of the torcular and transverse sinuses. The diminished redioactivity below the tentorium in the area of the dilated



fourth ventricle is also quite apparent. The simple, innocuous brain scan, then, has characteristic changes consistent with this entity and represents a previously undescribed method of demonstrating a Dandy-Walker malformation.

*From the Department of Radiology, Maine Medical Center, Portland, Maine 04102.

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The Journal of the Maine Medical Association

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Across The Desk

House Says Gifts to Hospitals Are Definitely Tax Deductible

In the tax reform bill passed by the House recently, the Ways & Means Committee bore down hard on private foundations, many of which work in the health field. But the panel went out of its way to preserve the tax exempt status of non-profit hospitals. The committee pointed out that in the past, *some Internal Revenue agents have challenged the exempt status of hospitals* as "charitable" institutions on the grounds that they accept insufficient numbers of non-paying patients. "This uncertainty threatens to affect the continued ability of hospitals to draw the necessary public support by way of contributions so as to be able to continue to exist and afford the necessary heavy capital expenditures required to keep pace with modern medical improvements," said the committee in its report (H. Rept. 91-413).

To resolve the problem, the committee established non-profit hospitals as a separate exempt category, but retained the limitations for tax exempt charitable organizations – that is, no passing profits on to private individuals, no electioneering, and only limited lobbying. The tax reform bill provides that non-profit hospitals are not included in the term "private foundations," and *insures that contributions to hospitals will be tax deductible* in the same manner as contributions to "charitable" organizations. The provision was written so it would not hinder pending court action on hospitals being questioned as profit-making associations of doctors.

The action on private foundations, while far-reaching, wasn't as severe as some had feared. Under the bill, *foundations for the first time will have to pay a 7½ percent tax* on their annual net investment income, and will have to pay out at least five percent of their average non-charitable assets. They are forbidden to spend money for lobbying, electioneering as in voter registration drives, and for grants to individuals, unless there are assurances the grants are made objectively. But the prohibition on propagandizing or otherwise attempting to influence legislation does permit making available the results of non-partisan analysis or research. In another area, the tax bill upheld the Internal Revenue Service ruling of last year that the AMA and other tax exempt organizations have to pay tax on income from journal advertising. – *Washington Report on Medicine & Health,* No. 1154, Aug. 11, 1969.

Doctors for Rural Maine

The American Medical Association's Council on Rural Health surveyed a random sample of 2,468 physicians practicing in non-metropolitan areas of the U.S. in 1967 through a questionnaire entitled, "Medical Practice in Small and Large Communities."

The questionnaire, which covered 71 items, was divided into three categories: 1) background material; 2) medical practice organizations; and 3) factors associated with practice and community.

Among the major findings were the following:

a) "Nearly one-half (49%) of the physicians reared in towns under 2,500 were practicing in a similar sized town, while the same percentage held true for physicians practicing in non-metropolitan cities of 25,000 or more and who were reared in cities of this size. The results would seem to indicate that the best chance of securing physicians for the smaller-sized communities is to have more young men with such a background enter the study of medicine.

b) "In regard to finding the location to practice, the hometown preference or suggestions of friends were most often listed, followed by nearby place of internship, as well as assistance of state and AMA Physician Placement services.

c) "Limited accessibility to continuing medical education programs and lack of opportunities for pro-

Continued on Page XIII

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Precautions: There have been infrequent reports of leukopenia and/or agranulocytosis and convulsive seizures. In epileptic patients, anticonvulsant medication should also be maintained. Pigmentary retinopathy may be avoided by remaining within the recommended limits of dosage. Administer cautiously to patients participating in activities requiring complete mental alertness (e.g., driving). Orthostatic hypotension is more common in females than in males. Do not use epinephrine in treating drug-induced hypotension. Daily doses in excess of 300 mg. should be used only in severe neuropsychiatric conditions.

Adverse Reactions: *Central Nervous System*—Drowsiness, especially with large doses, early in treatment; infrequently, pseudoparkinsonism and other extrapyramidal symptoms; nocturnal confusion, hyperactivity, lethargy, psychotic reactions, restlessness, and headache. *Autonomic Nervous System*—Dryness of mouth, blurred vision, constipation, nausea, vomiting, diarrhea, nasal stuffiness, and pallor. *Endocrine System*—Galactorrhea, breast engorgement, amenorrhea, inhibition of ejaculation, and peripheral edema. *Skin*—Dermatitis and skin eruptions of the urticarial type, photosensitivity. *Cardiovascular System*—Changes in the terminal portion of the electrocardiogram have been observed in some patients receiving the phenothiazine tranquilizers, including Mellaril (thioridazine). While there is no evidence at present that these changes are in any way precursors of any significant disturbance of cardiac rhythm, several sudden and unexpected deaths apparently due to cardiac arrest have occurred in patients previously showing electrocardiographic changes. The use of periodic electrocardiograms has been proposed but would appear to be of questionable value as a predictive device. *Other*—A single case described as parotid swelling.

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Maine Heart Association Notes

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Cardioversion of Supraventricular Tachycardias

Frequently, the superventricular tachycardias present difficult diagnostic and therapeutic problems. When they prove unyielding to vagal maneuvers, digitalis glycosides, and antiarrhythmic drugs, the patient is considered as a possible candidate for cardioversion. . . . It is often uncertain whether or not the arrhythmia is a toxic reaction to the cardiac glycosides. In the presence of digitalis intoxication, electrical shock may provoke serious and even lethal disorders of the heart beat. . . . The supraventricular tachycardias may seriously compromise cardiac function and must therefore be promptly reverted, and yet cardioversion presents a substantial hazard.

The role of cardioversion for terminating supraventricular tachycardias, exclusive of atrial fibrillation and atrial flutter, hitherto has not been defined. . . . The paucity of experience probably relates to the reluctance of using this technic in patients having arrhythmias which may be due to digitalis. . . . Yet the greatest urgency for reversion . . . frequently exists in patients with these particular disorders. . . . Since these arrhythmias generally occur in patients with substantial organic heart disease and advanced degrees of decompensation, the rapid ventricular rate further encroaches upon an already marginal cardiac reserve. Furthermore, since digitalis is commonly suspected as the provocative agent, the patient is denied the benefit of digitalis as well as diuretic drugs. When antiarrhythmic agents fail to restore sinus rhythm, the physician is then left with few if any therapeutic alternatives.

. . . When confronted with a supraventricular tachycardia, the first objective is to identify precisely the underlying mechanism. It is important to distinguish between PAT with block and other supraventricular mechanisms. In the former, unlike the latter group of disorders, the incidence of digitalis intoxication is high.

. . . Once the rhythm is identified as atrial flutter, no further temporizing is necessary. Cardioversion is the treatment of first choice. The success rate is nearly 100%. . . .

If the mechanism is found to be atrial or junctional tachycardia and the arrhythmia has proved refractory to vagal maneuvers and . . . antiarrhythmic drugs . . . , cardioversion is then the indicated treatment. Under these circumstances the likelihood that the arrhythmia is due to digitalis intoxication is less than 10%. . . .

If the mechanism is identified as PAT with block, the initial treatment should be with antiarrhythmic drugs. If however, the patient has not been receiving digitalis drugs, there should not be any hesitation in employing cardioversion. . . . However, the fact that drugs considered to be antidotes for the arrhythmias of digitalis intoxication have failed does not completely rule out the possibility that the arrhythmia results from digitalis overdosage. . . .

In the present series, complications were prevented by titration of energy during cardioversion to either an effective or minor toxic end point and by the intravenous use of lidocaine. When the shock does not accelerate the atrial rate but causes ventricular extrasystoles, it is safe to proceed with higher energies provided that lidocaine completely suppresses these ectopic beats. When the shock accelerates the atrial rate and provokes ventricular premature beats, it is usually unlikely that higher discharge energies will restore a normal mechanism. When lidocaine proves ineffective . . . cardioversion should be abandoned.

It has been demonstrated that low-energy shocks may expose the state of overdigitalization. . . . When . . . arrhythmias develop during cardioversion, the presence of an advanced degree of digitalis poisoning may be suspected. The employment of low-energy discharges in cardioversion may not only provide a definitive therapeutic result, but at times may afford otherwise unobtainable evidence of the presence of digitalis intoxication.

Submitted by Jacob B. Dana, M.D., President, Maine Heart Association.

Reference: Vassaux, C. and Lown, B., Circulation, Vol. XXXIX, pages 791-802.

AMERICAN CANCER SOCIETY - MAINE DIVISION, INC.

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New Program for Cancer Research

NEW YORK, N. Y. — The American Cancer Society recently announced a new million dollar annual program designed to speed basic research findings to the cancer patient.

The program, approved by the Executive Committee of the Board of Directors, will be named the Clinical Investigation Program. It will be concerned with the prevention, diagnosis and management of cancer in man. Funds will be provided by ACS unrestricted legacy income.

"Not one penny will be taken away from vital basic research," said Dr. Arthur I. Holleb, Senior Vice President for Medical Affairs of the ACS. "This new program evolved from the recognition that much more information can be developed from such investigation than has been critically applied for the good of the patient."

In cancer management, for example, the new ACS program might support studies of the role of preoperative radiation therapy; organ transplants following resections for cancer; the use of immune mechanisms, enzymes, radioactive labeling; pain control for advanced cancer.

"Other areas of clinical investigation," said Dr. Holleb, "might include medical genetics to identify high risk patients by family history studies of the effect breast feeding has or doesn't have on the future development of breast cancer."

The program will be governed by advisory and review committees and will be administered by the Medical Affairs Department of the ACS. Dr. Sidney L. Arje as Vice President for Clinical Investigation will be responsible for the administration of the program. The advisory committee, meeting twice annually, will screen grant applications from qualified physicians and scientists and forward those approved to the review committee. The review committee will send its recommendations to the ACS Board of Directors.

The advisory committee will consist of fifteen recognized experts in cancer prevention, diagnosis and management, none of whom are members of the ACS Board of Directors. The immediate past president of the ACS will be chairman of the review committee, comprising top officers of the ACS.

Dr. Holleb explained further: "We want to improve existing techniques of diagnosis of early cancer and encourage the development of new methods which apply the talents of engineering sciences, electronic scanning devices, fiberoptics and computerization. Can we come up with a universal blood test for diagnosing cancer? Can newly developed instruments meet the shortage of trained laboratory personnel and how valid are the results of diagnosis by machine? These are only a few of many questions we hope to answer."

Regular and periodic clinical conferences will be held to present the results of studies.

American Cancer Society News Service Release.

EMERGENCY MEDICAL SERVICES PROGRESS REPORT – 1968-1969 – *Continued from Page 208*

tion in related fields is also discussed regularly in the committee; and this information is disseminated through members of the committee and their representative groups.

Perhaps of most significance during the past legislative year with respect to our committee was a passage of a LD867 which provides for an appointed committee that will establish standards of training for personnel, equipment, and ambulance design to be implemented as a requirement for licensure of all ambulances in the State of Maine by July of 1970. The subcommittees, particularly on Training and on Vehicles and Equipment, have much work ahead of them to accomplish the goals which this timetable requires. It is hoped that the excellent participation by many members of the Maine Medical Association will continue on this committee, and it is also hoped that all physicians dealing with the problems of acute medical service will let the Advisory Committee as well as Mr. Richard A. Gerry, be aware of their own thoughts and ideas as well as criticisms of any and all phases of this state-wide plan.

Additional information regarding the progress of the Emergency Medical Services System will be made as new developments arise.

18 Bramhall Street, Portland, Maine 04102.

ACROSS THE DESK – *Continued from Page 220*

fessional growth were of concern to the respondents, and, in particular, to those practicing in the isolated rural counties.

d) "Physicians who liked rural practice and living did so because of the feeling that rural people were friendly and dependable, thus resulting in close, personal ties with the people; because they liked to be near the open country for recreation; because there was less traffic and confusion and a slower pace; and because relationships with their patients were pleasant.

e) "They indicated reasons for dissatisfaction with their present location centered around community limitations such as lack of social and cultural activities; shortage of physicians and other health personnel; lack of educational facilities; and inadequate living conditions."

To obtain a complimentary copy of the complete summary listing the 14 major findings of the comprehensive study, please direct your request to the AMA Council on Rural Health, 535 North Dearborn Street, Chicago, Illinois 60610.

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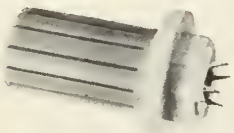
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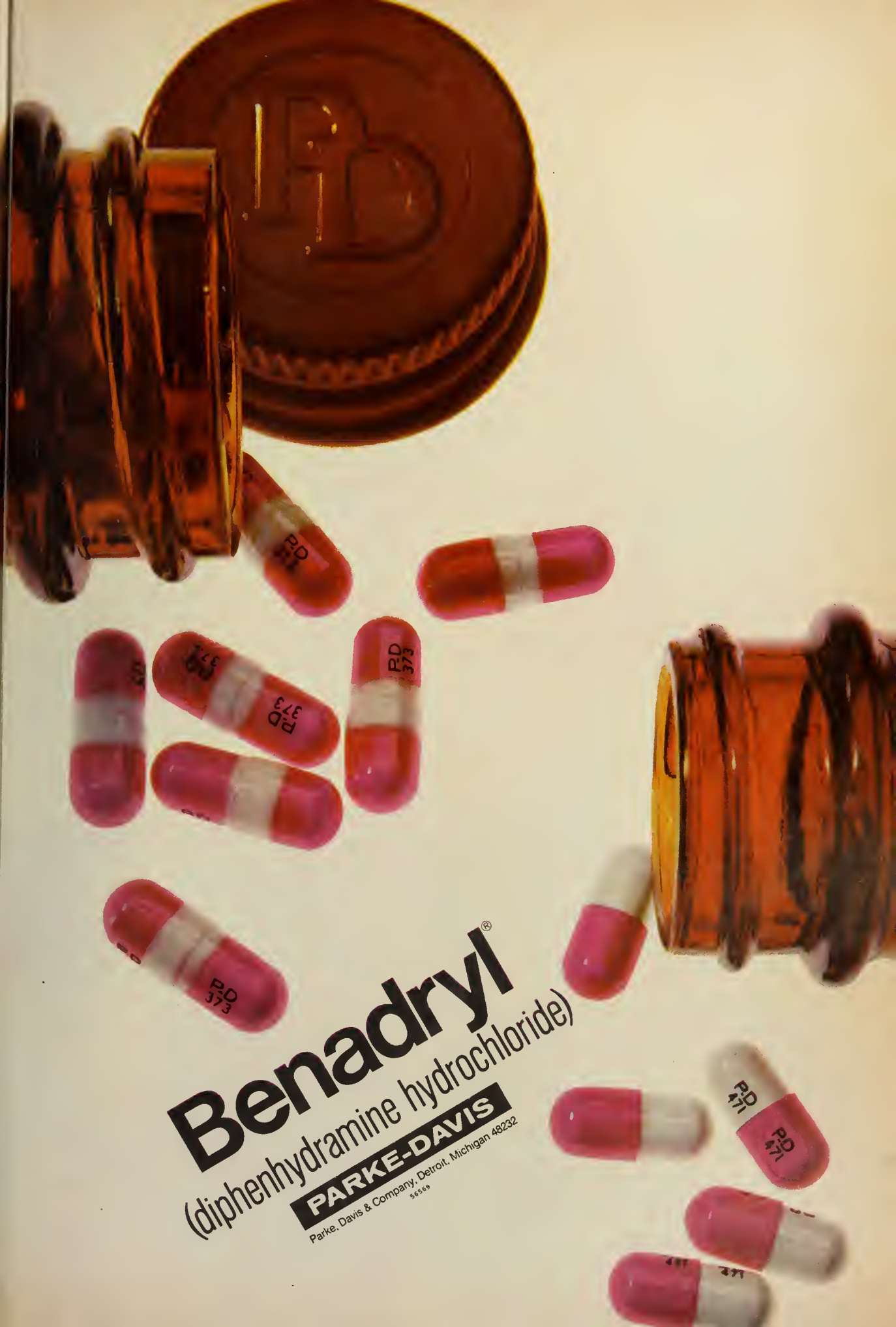
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Warning: May be habit forming.

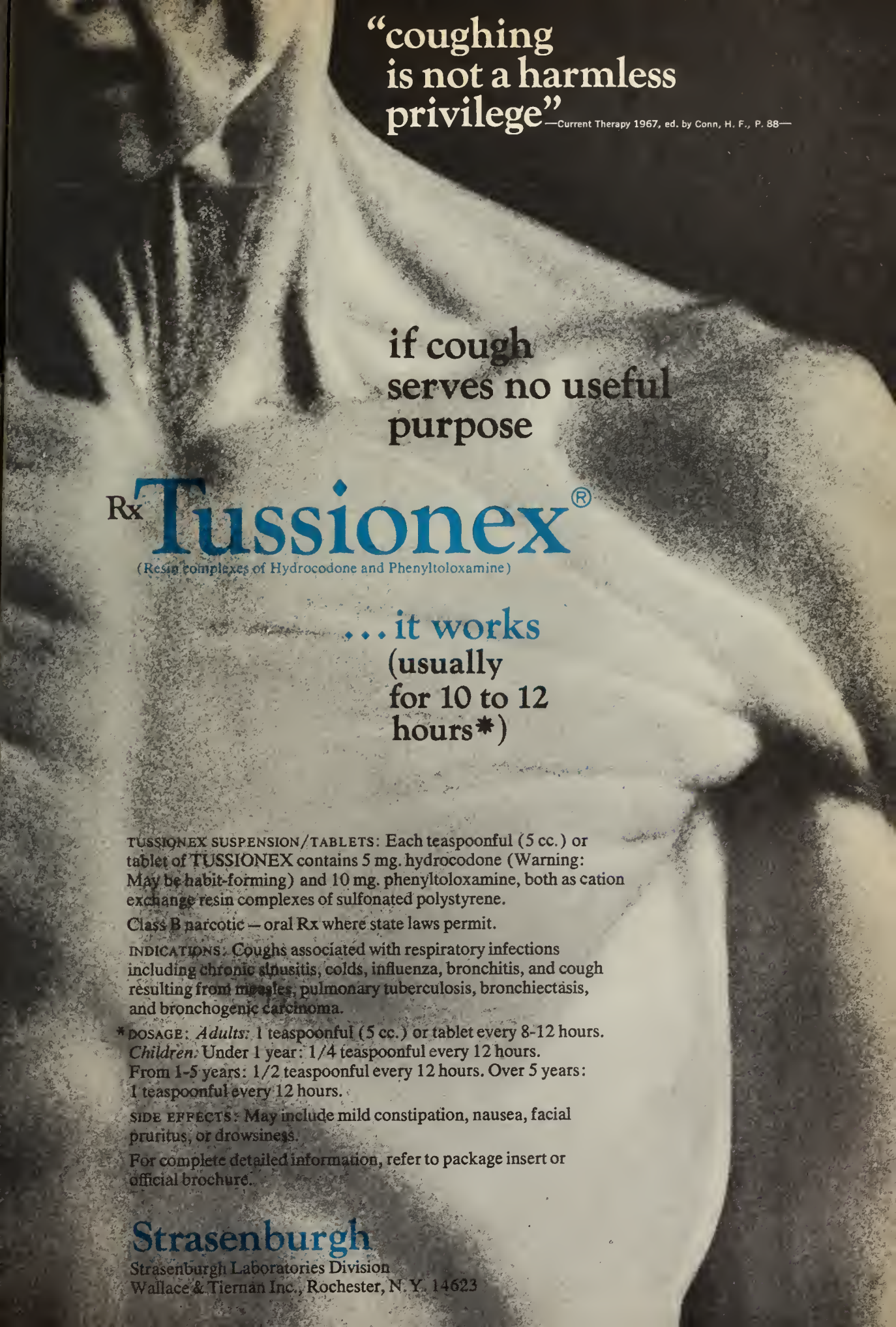
Usual Adult Dosage: As a daytime sedative, 15 mg. (¼ gr.) to 30 mg. (½ gr.) t.i.d. or q.i.d.

Available for daytime sedation: Tablets, 15 mg. (¼ gr.), 30 mg. (½ gr.); Elixir, 30 mg. per 5 cc. (alcohol 7%).

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* DOSAGE: *Adults:* 1 teaspoonful (5 cc.) or tablet every 8-12 hours. *Children:* Under 1 year: 1/4 teaspoonful every 12 hours. From 1-5 years: 1/2 teaspoonful every 12 hours. Over 5 years: 1 teaspoonful every 12 hours.
SIDE EFFECTS: May include mild constipation, nausea, facial pruritus, or drowsiness.
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Fire victim. Examination reveals second degree burn of lower leg. To combat shock, restore circulatory volume and replace protein loss, plasma is administered. Local pressure dressing applied. Limb elevated to limit the flow of lymph. About 36 hours after admission the patient develops an elevated temperature and complains of pain at the site of the lesion. Dressing removed. A suppurating slough area has developed over part of the burn. A swab specimen is taken for culture and the slough area is debrided. Antibacterial treatment is begun with Terramycin I.M. Days later, recovery is progressing, and the laboratory report shows a mixed infection with a predominance of susceptible coliform bacteria, confirming the therapeutic choice. Terramycin therapy is continued until all signs of infection disappear.

Experience has shown that Terramycin offers special advantages in treating bacterial infections complicating burns, when strains of causative organisms are susceptible. Broad-spectrum antibacterial coverage. Activity unaffected by penicillinase. Rapidly achieved therapeutic blood levels. Proven tissue toleration.

Terramycin I.M. is the only preconstituted broad-spectrum antibiotic designed specifically for intramuscular use. Requires no refrigeration. Remains stable for at least two years. Available for immediate use in Isoject,® a disposable injection unit. In difficult as well as routine cases, when tests reveal susceptible organisms, consider Terramycin. One of the world's most widely used broad-spectrums.

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(oxytetracycline)



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Contraindicated: In individuals hypersensitive to any of the components of this drug.

Warnings: If renal impairment exists, even usual doses may lead to excessive systemic accumulation and possible liver toxicity. In such patients, lower than usual doses are indicated and for prolonged therapy oxytetracycline serum level determinations may be advisable.

Terramycin may form a stable calcium complex in any bone-forming tissue with no serious harmful effects reported thus far in humans.

Use of oxytetracycline during the last trimester of pregnancy, neonatal period and early childhood may cause discoloration of teeth. This effect occurs mostly during long-term use of the drug, but it has also been observed in usual short-treatment courses.

During treatment with tetracyclines, individuals susceptible to photodynamic reactions should avoid direct sunlight. Discontinue therapy at first evidence of skin discomfort.

Note: With oxytetracycline, phototoxicity is not believed to occur and photoallergy is very rare.

Precautions: Use of broad-spectrum antibiotics occasionally may result in overgrowth of nonsusceptible organisms. Where such infections occur, discontinue oxytetracycline and institute specific therapy.

As with all intramuscular preparations, Terramycin Intramuscular Solution should be injected well within the body of a relatively large muscle. *Adults:* The preferred sites are the upper outer quadrant of the buttock (i.e., gluteus maximus), or the mid-lateral thigh. *Children:* It is recommended that intramuscular injections be given preferably in the mid-lateral muscles of the thigh. In infants and small children the periphery of the upper outer quadrant of the gluteal region should be used only when necessary, such as in burn patients, in order to minimize the possibility of damage to the sciatic nerve.

The deltoid area should be used only if well developed such as in certain adults and older children, and then only with caution to avoid radial nerve injury. Intramuscular injections should not be made into the lower and mid-thirds of the upper arm. As with all intramuscular injections, aspiration is necessary to help avoid inadvertent injection into a blood vessel.

Increased intracranial pressure with bulging fontanelles has been observed occasionally in infants receiving therapeutic doses of the drug, but such signs and symptoms have disappeared rapidly on cessation of treatment with no sequelae.

Adverse Reactions: Subcutaneous and fat-layer injection may produce mild pain and induration which may be relieved by an ice pack. Very mild gastrointestinal disturbances, not requiring discontinuance of the drug, may occur occasionally. Allergic reactions, including anaphylaxis, rarely have been observed.

Dosage: *Adult:* The optimal dosage varies, depending on the type and severity of infection. Unless otherwise specified, a dose of 100 mg. every 8 to 12 hours, or a single daily dose of 250 mg. should be adequate for the treatment of most mild or moderately severe infections. In severe infections, 100 mg. every 6 to 8 hours, or 250 mg. every 12 hours may be necessary.

Serum levels obtained by the recommended dosages are comparable to those provided by the oral dosage of 1 to 2 Gm. daily in adults. Antibiotic therapy should be continued for at least 24 to 48 hours after all symptoms and fever have subsided.

In certain diseases specific courses of therapy may be recommended as a general guide. In primary and secondary syphilis for example, the daily administration of 2 Gm. oxytetracycline, orally, in divided doses for two weeks has given good results. In cases of gonococcal infection two intramuscular injections of 250 mg. each, or one intramuscular injection of 250 mg. combined with one gram given orally as a single dose, will usually suffice, but repetition of this therapy will be required in an occasional case.

In the treatment of hemolytic streptococcal infections, therapy should continue for at least 10 days to prevent development of rheumatic fever or glomerulonephritis.

In the treatment of staphylococcal infections indicated surgical procedures should be carried out in all cases.

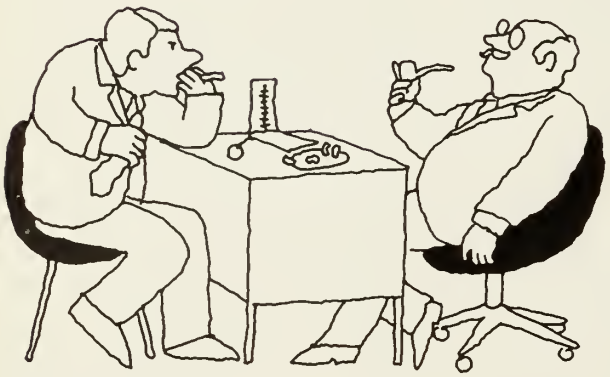
Pediatric: A dosage of 3 mg./lb./day in two doses has been found satisfactory in the treatment of most mild to moderately severe infections. For more severe infections, higher dosages may be indicated and should be adjusted accordingly.

Terramycin Intramuscular Solution provides maximum absorption and patient toleration with minimal local irritation.

Supply: Terramycin (oxytetracycline) Intramuscular Solution: available in single dose, prescored glass ampules containing 100 or 250 mg. oxytetracycline/2 cc., Isoject® syringes containing 100 or 250 mg. oxytetracycline/2 cc. and 10 cc. multiple dose vials containing 50 mg. oxytetracycline/cc.

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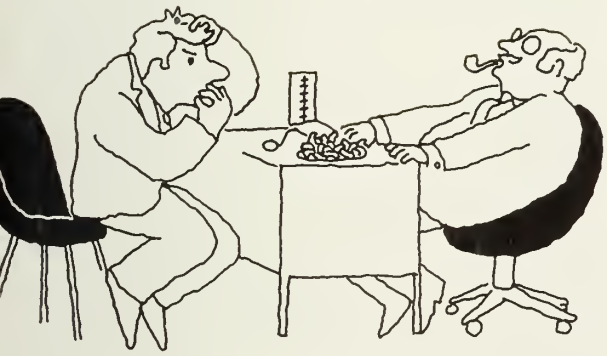


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chlorthalidone 50 mg.
reserpine U.S.P. 0.25 mg.

Regroton®: chlorthalidone 50 mg., reserpine U.S.P. 0.25 mg.
Indications: Hypertension. *Contraindications:* History of mental depression, hypersensitivity, and most cases of severe renal or hepatic diseases. *Warning:* With the administration of enteric-coated potassium supplements, which should be used only when adequate dietary supplementation is not practical, the possibility of small-bowel lesions (obstruction, hemorrhage, and perforation) should be kept in mind. Surgery for these lesions has frequently been required and deaths have occurred. Discontinue coated potassium-containing formulations immediately if abdominal pain, distention, nausea, vomiting, or gastrointestinal bleeding occur. Discontinue one week before electroshock therapy, and if depression or peptic ulcer occurs. *Use in pregnancy:* Because chlorthalidone may cross the placental barrier and appear in cord blood and thiazides may appear in breast milk, this drug should be used with care in pregnant patients and nursing mothers. When used in women of childbearing age, the potential benefits of the drug should be weighed against the possible hazards to the fetus. Use of chlorthalidone may result in fetal or neonatal jaundice, thrombocytopenia, and possibly other adverse reactions which have occurred in the adult. Increase respiratory secretions, nasal congestion, cyanosis and anorexia m. occur in infants born to reserpine-treated mothers. *Precautions:* Antih pertensive therapy with this drug should always be initiated cautious in postsympathectomy patients and in patients receiving ganglion blocking agents, other potent antihypertensive drugs, or curare. Reduc dosage of concomitant antihypertensive agents by at least one-half. avoid hypotension during surgery, discontinue therapy with this age two weeks prior to elective surgical procedures. In emergency surger use, if needed, anticholinergic or adrenergic drugs or other supporti measures as indicated. Because of the possibility of progression renal damage, periodic kidney function tests are indicated. Discontin if the BUN rises or liver dysfunction is aggravated. Hepatic coma m be precipitated. Electrolyte imbalance, sodium and/or potassium d pletion may occur. If potassium depletion should occur during therap the drug should be discontinued and potassium supplements give provided the patient does not have marked oliguria. Take particular ca in cirrhosis or severe ischemic heart disease and in patients receivi

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WE'VE GOT PROBLEMS.



and allay anxiety in hypertension

rticosteroids, ACTH, or digitalis. Severe salt restriction is not recommended. Use cautiously in patients with ulcerative colitis or gallstones iliary colic may be precipitated). Bronchial asthma may occur in sceptible patients. *Adverse Reactions:* The drug is generally well lerated. The most frequent side effects are nausea, gastric irritation, miting, diarrhea, constipation, muscle cramps, headache, dizziness d acute gout. Other potential side effects include angina pectoris, xiety, depression, bradycardia and ectopic cardiac rhythms (especially when used with digitalis), drowsiness, dull sensorium, hyperglyemia and glycosuria, hyperuricemia, lassitude, restlessness, transient yopia, impotence or dysuria, orthostatic hypotension which may be otentiated when chlorthalidone is combined with alcohol, barbiturates narcotics, leukopenia, aplastic anemia, skin rashes, thrombocytoenia, agranulocytosis, nasal stuffiness, increased gastric secretions, ghtmare, purpura, urticaria, ecchymosis, weakness, uveitis, optic rophy and glaucoma, and pruritus. Eruptions and/or flushing of the kin, a reversible paralysis agitans-like syndrome, blurred vision, conjunctival injection, increased susceptibility to colds, dyspnea, weight gain, decreased libido, dryness of the mouth, deafness, anorexia, and pancreatitis when epigastric pain or unexplained G.I. symptoms develop after prolonged administration. Jaundice, xanthopsia, paresthesia, photosensitization and necrotizing angiitis are possible. *Average Dosage:* One tablet daily with breakfast. *Availability:* Pink, single-scored tablets in bottles of 100 and 1000. (B)46-600-C

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Brief Summary. Blurring of vision, dry mouth, difficult urination, and flushing or dryness of the skin may occur on higher dosage levels, rarely on usual dosage. Administer with caution to patients with incipient glaucoma or urinary bladder neck obstruction. Contraindicated in acute glaucoma, advanced renal or hepatic disease or a hypersensitivity to any of the ingredients.

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Formulas: Each 'Dexamyl' *Spansule* capsule No. 1 contains 10 mg. of Dexedrine® (brand of dextroamphetamine sulfate) and 1 gr. of amobarbital, derivative of barbituric acid (Warning, may be habit forming). Each 'Dexamyl' *Spansule* capsule No. 2 contains 15 mg. of Dexedrine (brand of dextroamphetamine sulfate) and 1½ gr. of amobarbital (Warning, may be habit forming).
Before prescribing, see complete prescribing information in SK&F literature or *PDR*.
Contraindications: Hyperexcitability, undue restlessness, hyperthyroidism, porphyria; in patients on MAO inhibitors.
Precautions: Use with caution in patients hypersensitive to sympathomimetics or barbiturates and in coronary or cardiovascular disease or severe hypertension. Excessive use of the amphetamines by unstable individuals may result in a psychological dependence. Rarely, symptoms of toxic psychosis (hallucinations, confusion, panic states, etc.) may occur with amphetamines, usually after prolonged high dosage. In these instances, withdraw the medication. Use cautiously in pregnant patients, especially in the first trimester.
Adverse Reactions: Overstimulation, restlessness, insomnia, g.i. disturbances, diarrhea, palpitation, tachycardia, elevated blood pressure, tremor, sweating, impotence and headache.
Supplied: In bottles of 50.

Dexamyl®

brand of dextroamphetamine sulfate and amobarbital

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curbs appetite
encourages normal activity
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when it's late in life and anxiety and depression coexist...

initial therapy

Triavil® 4-10

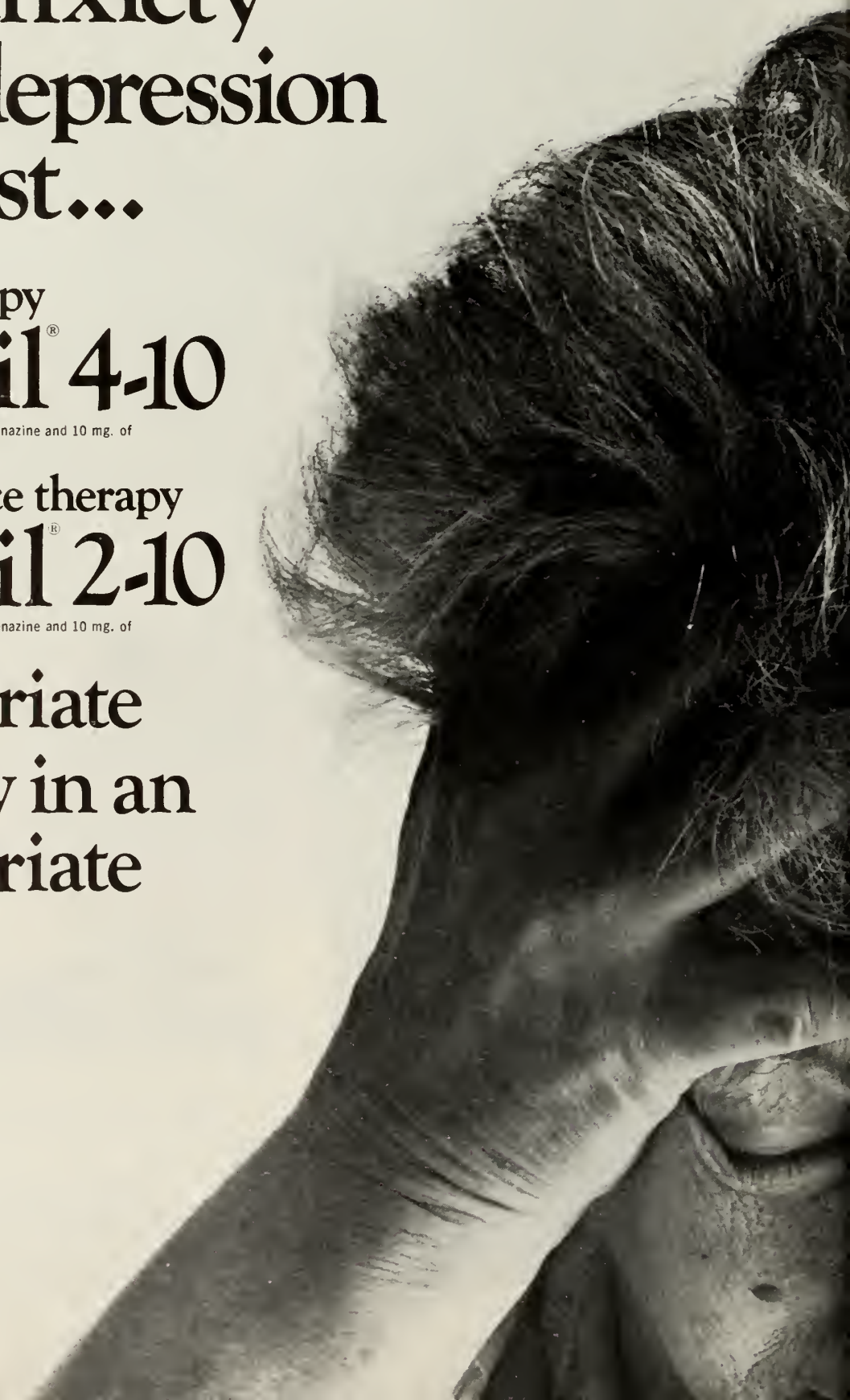
Each tablet contains 4 mg. of perphenazine and 10 mg. of amitriptyline hydrochloride

maintenance therapy

Triavil® 2-10

Each tablet contains 2 mg. of perphenazine and 10 mg. of amitriptyline hydrochloride.

appropriate therapy in an appropriate dosage





During the years of declining strength and increasing infirmity, many patients are more sensitive to both the desired response and the unwanted effects of some drugs. That's when low-dosage therapy is needed. And that's when TRIAVIL 4-10, as initial therapy, and TRIAVIL 2-10, for maintenance, can prove particularly useful.

Starting with TRIAVIL 4-10 should help minimize possible dose-related side effects in the geriatric patient with coexisting anxiety and depression. And, subsequently, TRIAVIL 2-10 can increase flexibility in adjusting maintenance dosage.

Activities made hazardous by diminished alertness should be avoided. You will want to inform your patients that the effects of alcohol may be potentiated. Because of the potentiation of other drug effects possible with MAO inhibitors, such agents should not be given concomitantly with TRIAVIL. However, therapy with TRIAVIL can be initiated cautiously two weeks or more after withdrawal of the MAOI drugs. And, until significant remission is observed, close supervision of any seriously depressed patient is, of course, essential to guard against possible suicide. The drug is contraindicated in glaucoma, in patients expected to experience problems of urinary retention, in drug-induced CNS depression, and in bone marrow depression.

TRIAVIL 4-10 & 2-10—tranquilizer-antidepressant therapy especially appropriate for the elderly patient so often intolerant to medication in high dosages.

TRIAVIL®
containing perphenazine and amitriptyline HCl
TRANQUILIZER-ANTIDEPRESSANT

for moderate to severe anxiety with coexisting depression

For additional prescribing information, please see following page.



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TRIAVIL 4-10: Each tablet contains 4 mg. of perphenazine and 10 mg. of amitriptyline hydrochloride.
TRIAVIL 2-25: Each tablet contains 2 mg. of perphenazine and 25 mg. of amitriptyline hydrochloride.
TRIAVIL 4-25: Each tablet contains 4 mg. of perphenazine and 25 mg. of amitriptyline hydrochloride.
TRIAVIL 2-10: For use in adjusting maintenance dosage. Each tablet contains 2 mg. of perphenazine and 10 mg. of amitriptyline hydrochloride.

for moderate to severe anxiety with coexisting depression

INDICATIONS: Patients with moderate to severe anxiety and/or agitation and depressed mood; patients with depression in whom anxiety and/or agitation are severe; patients with depression and anxiety in association with chronic physical disease; schizophrenics with associated depressive symptoms.

CONTRAINDICATIONS: Central nervous system depression from drugs (barbiturates, alcohol, narcotics, analgesics, antihistamines); bone marrow depression; urinary retention; pregnancy; glaucoma. Do not give in combination with MAOI drugs because of possible potentiation that may even cause death. Allow at least 2 weeks between therapies. In such patients therapy with TRIAVIL should be initiated cautiously, with gradual increase in the dosage required to obtain a satisfactory reponse.

WARNINGS: Patients should be warned against driving a car or operating machinery or apparatus requiring alert attention, and that response to alcohol may be potentiated.

PRECAUTIONS: Suicide is always a possibility in mental depression and may remain until significant remission occurs. Supervise patients closely in case they may require hospitalization or concomitant electroshock therapy. Untoward reactions have been reported after the combined use of antidepressant agents having various modes of activity. Accordingly, consider possibility of potentiation in combined use of antidepressants. Not recommended for use in children. Mania or hypomania may be precipitated in manic-depressives (perphenazine in TRIAVIL seems to reduce likelihood of this effect). If hypotension develops, epinephrine should not be employed, as its action is blocked and partially reversed by perphenazine. Caution patients about errors of judgment due to change in mood.

SIDE EFFECTS: Similar to those reported with either constituent alone. **Perphenazine:** Should not be used indiscriminately. Use caution in patients with history of convulsive disorders or severe reactions to other phenothiazines. Likelihood of untoward actions greater with high doses. Closely supervise with any dosage. Side effects may be any of those reported with phenothiazine drugs: blood dyscrasias (pancytopenia, thrombocytopenic purpura, leukopenia, agranulocytosis, eosinophilia); liver damage (jaundice, biliary stasis); extrapyramidal symptoms (opisthotonos, oculogyric crisis, hyperreflexia, dystonia, akathisia, dyskinesia, parkinsonism) usually controlled by the concomitant use of effective antiparkinsonian drugs and/or by reduction in dosage, but sometimes persist after discontinuation of the phenothiazine; severe, acute hypotension (of particular concern in patients with mitral insufficiency or pheochromocytoma); skin disorders (photosensitivity, itching, erythema, urticaria, eczema, up to exfoliative dermatitis); other allergic reactions (asthma, laryngeal edema, angioneurotic edema, anaphylactoid reactions); peripheral edema; reversed epinephrine effect; endocrine disturbances (lactation, galactorrhea, disturbances of menstrual cycle); grand mal convulsions; cerebral edema; altered cerebrospinal fluid proteins; polyphagia; paradoxical excitement; photophobia; skin pigmentation; failure of ejaculation; EKG abnormalities (quinidine-like effect); reactivation of psychotic processes; catatonic-like states; autonomic reactions such as dryness of the mouth, headache, nausea, vomiting, constipation, obstipation, urinary frequency, blurred vision, nasal congestion, and a change in the pulse rate; hypnotic effects; pigmentary retinopathy; corneal and lenticular pigmentation; occasional lassitude; muscle weakness; mild insomnia; significant unexplained rise in body temperature may suggest intolerance to perphenazine, in which case discontinue. Antiemetic effect may obscure signs of toxicity due to overdosage of other drugs or make diagnosis of other disorders such as brain tumors or intestinal obstruction difficult. May potentiate central nervous system depressants (opiates, analgesics, antihistamines, barbiturates, alcohol), atropine, heat, and phosphorous insecticides. **Amitriptyline:** Careful observation of all patients recommended. Side effects include drowsiness (may occur within the first few days of therapy); dizziness; nausea; excitement; hypotension; fainting; fine tremor; jitteriness; weakness; headache; heartburn; anorexia; increased perspiration; incoordination; allergic-type reactions manifested by skin rash, swelling of face and tongue, itching; numbness and tingling of limbs, including peripheral neuropathy; activation of latent schizophrenia (however, the perphenazine content may prevent this reaction in some cases); epileptiform seizures in chronic schizophrenics; temporary confusion, disturbed concentration, or transient visual hallucinations on high doses; evidence of anticholinergic activity, such as tachycardia, dryness of mouth, blurring of vision, urinary retention, constipation, paralytic ileus; agranulocytosis; jaundice. The antidepressant activity may be evident within 3 or 4 days or may take as long as 30 days to develop adequately, and lack of response sometimes occurs. Response to medication will vary according to severity as well as type of depression present. Elderly patients and adolescents can often be managed on lower dosage levels.

Before prescribing or administering, read product circular with package or available on request.

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Obesity Oddities

FACT & LEGEND

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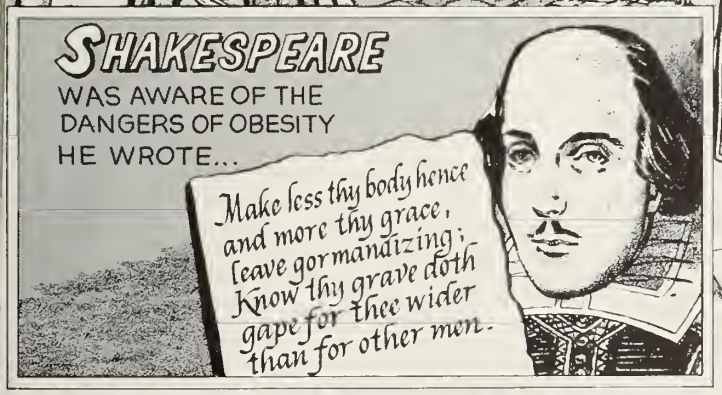


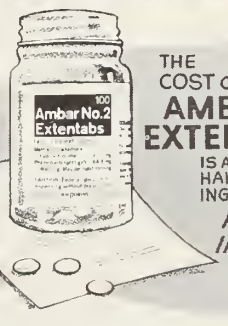
RECORDED ON AN ENGLISHMAN'S TOMBSTONE

JAMES PARSON
DIED 1743
HE HAD OFTEN EATEN A WHOLE SHOULDER OF MUTTON AND A PECK OF HASTY PUDDING

SHAKESPEARE WAS AWARE OF THE DANGERS OF OBESITY HE WROTE...

Make less thy body hence and more thy grace, leave gormandizing; know thy grave doth gape for thee wider than for other men.





THE COST OF AMBAR EXTENTABS IS APPROXIMATELY ONE HALF THAT OF OTHER LEADING APPETITE SUPPRESSANTS

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One Ambar Extentab before breakfast can help control most patients' appetite for up to 12 hours. Methamphetamine, the appetite suppressant, gently elevates mood and helps overcome dieting frustrations. Phenobarbital, the sedative in Ambar, controls irritability and anxiety... helps maintain a state of mental calm and equanimity. Both work together to ease the tensions that erode the willpower during periods of dieting.

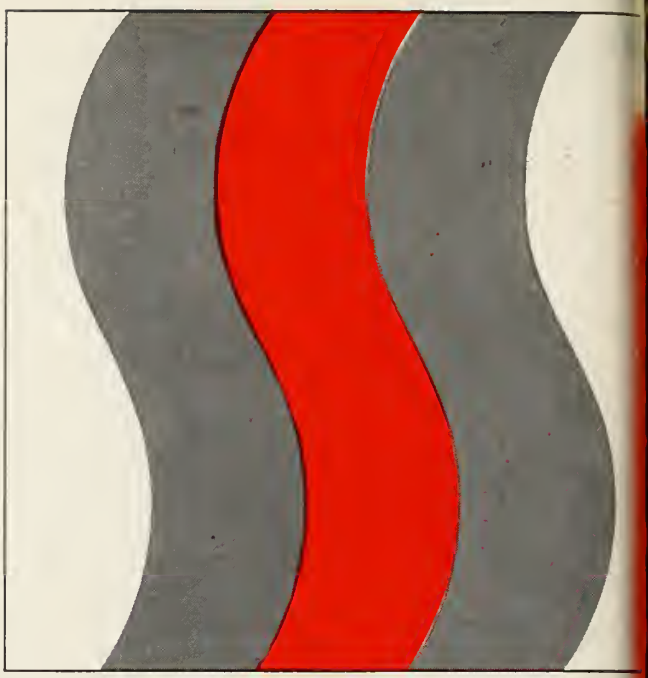
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BRIEF SUMMARY/**Indications:** Ambar suppresses appetite and helps offset emotional reactions to dieting. **Contraindications:** Hypersensitivity to barbiturates or sympathomimetics; patients with advanced renal or hepatic disease. **Precautions:** Administer with caution in the presence of cardiovascular disease or hypertension. **Side Effects:** Nervousness or excitement occasionally noted, but usually infrequent at recommended dosages. Slight drowsiness has been reported rarely. See package insert for further details.

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with the aid of antianxiety

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In an age of swift change and challenge, susceptible individuals may experience varying degrees of excessive anxiety. The resulting emotional stress may precipitate significant functional disorders or complicate existing organic disease. In properly individualized maintenance dosage, Librium (chlordiazepoxide HCl) quickly helps relieve anxiety and apprehension, provides useful adjunctive therapy in psychophysiologic disorders—yet seldom impairs mental acuity or ability to function. Librium has demonstrated a wide margin of safety in short- and long-term therapy.

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Before prescribing, please consult complete product information, a summary of which follows:

Indications: Indicated when anxiety, tension and apprehension are significant components of the clinical profile.

Contraindications: Patients with known hypersensitivity to the drug.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards.

Precautions: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (*e.g.*, excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

[redacted]

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23 OCT 1969



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TEPANIL—the right start in support of the weight-control program *you* recommend. It reduces the appetite. Doesn't kill it. Weight loss is significant—gradual—yet there is a relatively low incidence of CNS stimulation. Because TEPANIL works on the appetite, not on the "nerves."

Contraindications: Cancurrently with MAO inhibitors, in patients hypersensitive ta this drug; in emotionolly unstable patients susceptible to drug abuse.

Warning: Althaugh generally safer than the amphetamines, use with great cautian in patients with severe hypertension or severe cardiavascular disease. Do not use during first trimester of pregnancy unless potential benefits outweigh potentiol risks.

Adverse Reactions: Rarely severe enaugh ta require discontinuatian af therapy, unpleasant symptoms with diethylprapion hydrochloride have been reparted to occur in relatively law incidence.

As is characteristic af sympathamimetic agents, it may accasianally cause *CNS effects* such as insomnia, nervausness, dizziness, anxiety, and jitteriness. In cantrast, CNS depressian has been reported. In a few epileptics an increase in canvulsive episades has been reparted.

Sympathomimetic *cardiavascular effects* reparted include ones such as tachycardia, precardial poin, arrhythmia, palpitatian, and increased blaad pressure. One published report described T-wave changes in the ECG af a healthy yaung male after ingestian af diethylprapian hydrochloride; this was an isalated experience, which has not been reported by others.

Allergic phenamena reported include such conditians as rash, urticaria, ecchymosis, and erythema. *Gastrointestinal effects* such as diarrhea, canstipatian, nausea, vomiting, and abdominal discomfart have been reported.

Specific reports on the hematapoietic system include two each of bane marraw depression, ogranulocytasis, and leukopenia.

A variety af miscellaneaus adverse reactions have been reported by physicians. These include complaints such as dry mauth, headache, dyspnea, menstrual upset, hair lass, muscle pain, decreased libida, dysuria, and palyuria.

Convenience of two dosage forms: TEPANIL Ten-tab tablets: One 75 mg. tablet daily, swallawed whole, in midmorning (10 a.m.); TEPANIL: One 25 mg. tablet three times daily, ane haur before meals. If desired, an additianal tablet may be given in midevening ta avercome night hunger. Use in children under 12 years af age is nat recammended.

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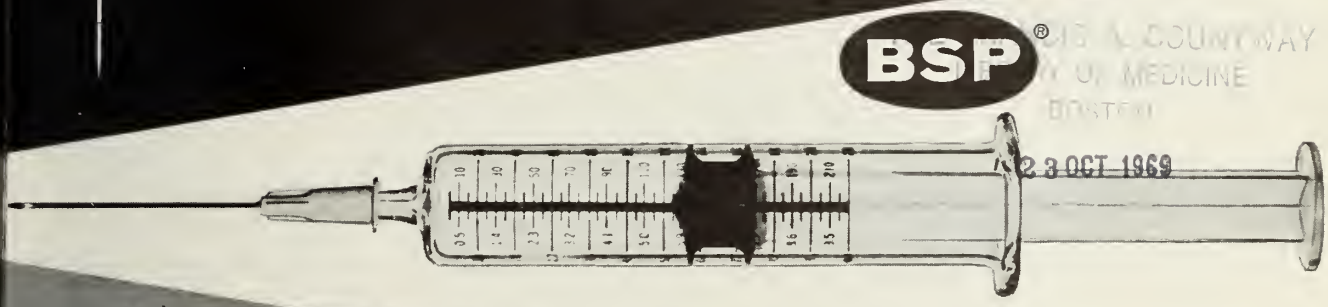
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23 OCT 1969

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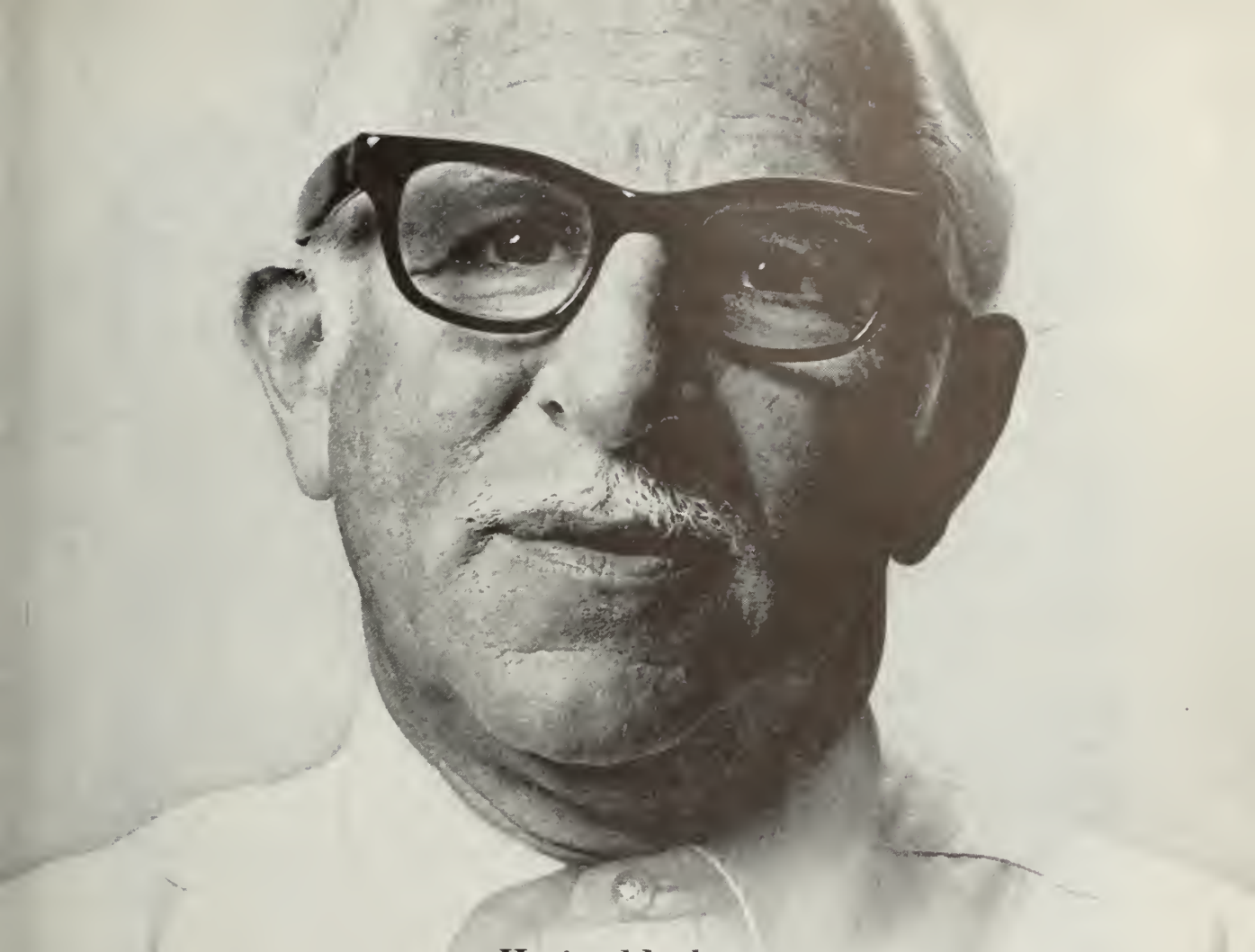
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He is on corticosteroids.
When he needs an antibiotic
he may be a candidate for

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Precautions: Overgrowth of nonsusceptible organisms may occur. Constant observation is essential. If new infections appear, appropriate measures should be taken. In infants, increased intracranial pressure with bulging fontanels has been observed. All signs and symptoms have disappeared rapidly upon cessation of treatment.

Side Effects: Gastrointestinal system—anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis, pruritus ani. Skin—maculopapular and erythematous rashes; a rare case of exfoliative dermatitis has been reported. Photosensitivity; onycholysis and discoloration of the nails (rare). Kidney—rise in BUN, apparently dose related. Transient increase in urinary output, sometimes accompanied by thirst (rare). Hypersensitivity reactions—urticaria, angioneurotic edema, anaphylaxis. Teeth—dental staining (yellow-brown) in children of mothers given this drug during the latter half of pregnancy, and in children given the drug during the neonatal period, infancy and early childhood. Enamel hypoplasia has been seen in a few children. If adverse reaction or idiosyncrasy occurs, discontinue medication and institute appropriate therapy. Demethylchlortetracycline may form a stable calcium complex in any bone-forming tissue with no serious harmful effects reported thus far in humans.

Average Adult Daily Dosage: 150 mg q.i.d. or 300 mg b.i.d. Should be given 1 hour before or 2 hours after meals, since absorption is impaired by the concomitant administration of high calcium content drugs, foods and some dairy products. Treatment of streptococcal infections should continue for 10 days, even though symptoms have subsided.

Lederle

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"All Interns are Alike"

It stands to reason. They all go through the same training; they all have to pass the same tests; they all have to measure up to the same standards; they all are underpaid, too. Therefore, all interns are alike.

That's utter nonsense, of course. But it's no more nonsensical than what some people say about aspirin. Namely: since all aspirin is at least supposed to come up to certain required standards, then all aspirin tablets must be alike.

Bayer's standards are far more demanding. In fact, there are at least *nine specific differences* involving purity, potency and speed of tablet disintegration. These Bayer® standards result in significant product benefits including gentleness to the stomach, and product stability that enables Bayer tablets to *stay* strong and gentle until they are taken.

So next time you hear someone say that all aspirin tablets are alike, you can say, with confidence, that it just isn't so.

You might also say that all interns aren't alike, either.





symptoms of mixed anxiety-depression are rarely clear-cut...
but they are often a clear indication for

Mellaril®
(thioridazine)
25 mg. t.i.d.

effective in mixed anxiety-depression and in moderate to severe anxiety

Before prescribing or administering, see Sandoz literature for full product information, including adverse reactions reported with phenothiazines. The following is a brief precautionary statement.

Contraindications: Severe central nervous system depression, comatose states from any cause, hypertensive or hypotensive heart disease of extreme degree.

Warnings: Administer cautiously to patients who have previously exhibited a hypersensitivity reaction (e.g., blood dyscrasias, jaundice) to phenothiazines. Phenothiazines are capable of potentiating central nervous system depressants (e.g., anesthetics, opiates, alcohol, etc.) as well as atropine and phosphorus insecticides. During pregnancy, administer only when necessary.

Precautions: There have been infrequent reports of leukopenia and/or agranulocytosis and convulsive seizures. In epileptic patients, anticonvulsant medication should also be maintained. Pigmentary retinopathy may be avoided by remaining within the recommended limits of dosage. Administer cautiously to patients participating in activities requiring complete mental alertness (e.g., driving). Orthostatic hypotension is more common in females than in males. Do not use epinephrine in treating drug-induced hypotension. Daily doses in excess of 300 mg. should be used only in severe neuropsychiatric conditions.

Adverse Reactions: *Central Nervous System*—Drowsiness, especially with large doses, early in treatment; infrequently, pseudoparkinsonism and other extrapyramidal symptoms; nocturnal confusion, hyperactivity, lethargy, psychotic reactions, restlessness, and headache. *Autonomic Nervous System*—Dryness of mouth, blurred vision, constipation, nausea, vomiting, diarrhea, nasal stuffiness, and pallor. *Endocrine System*—Galactorrhea, breast engorgement, amenorrhea, inhibition of ejaculation, and peripheral edema. *Skin*—Dermatitis and skin eruptions of the urticarial type, photosensitivity. *Cardiovascular System*—Changes in the terminal portion of the electrocardiogram have been observed in some patients receiving the phenothiazine tranquilizers, including Mellaril (thioridazine). While there is no evidence at present that these changes are in any way precursors of any significant disturbance of cardiac rhythm, several sudden and unexpected deaths apparently due to cardiac arrest have occurred in patients previously showing electrocardiographic changes. The use of periodic electrocardiograms has been proposed but would appear to be of questionable value as a predictive device. *Other*—A single case described as parotid swelling.

SANDOZ PHARMACEUTICALS, HANOVER, N.J. SANDOZ 69-384

Mild ulcerative colitis may be triggered here...



In mild ulcerative colitis, a number of factors can precipitate an attack: for instance, dietary indiscretion, such as eating raw foods, or emotional overreaction, such as that aroused by financial difficulties. No matter what causes the patient's sensitive colon to "act up," he soon suffers from acute discomfort...and often, from anxiety and apprehension as well. Such patients frequently respond well to adjunctive dual-action Librax® therapy.

Librax combines, in a single convenient capsule, the well-known antianxiety effect of Librium® (chlordiazepoxide HCl) and the dependable anticholinergic /antispasmodic effect of Quarzan® (clidinium Br). Therefore, as Librax helps to relieve the patient's excessive anxiety and reduce his overreaction to stress, it also, at the same time, helps to control hypersecretion and hypermotility, thus relieving spasm and abdominal discomfort.

With Librax, the dosage schedule is simple: 1 or 2 capsules, t.i.d. or q.i.d., will in most cases bring the patient significant relief of both the emotional and physical elements that contribute to his psychovisceral disorder.

Before prescribing, please consult complete product information, a summary of which follows.

INDICATIONS: Indicated as adjunctive therapy to control emotional and somatic factors in gastrointestinal disorders.

CONTRAINDICATIONS: Patients with glaucoma; prostatic hypertrophy and benign bladder neck obstruction; known hypersensitivity to chlordiazepoxide HCl and/or clidinium bromide.

WARNINGS: Caution patients about possible combined effects with alcohol and other CN depressants. As with all CNS-acting drugs, ca tion patients against hazardous occupations r quiring complete mental alertness (*e.g.*, operati machinery, driving). Though physical and ps chological dependence have rarely been report on recommended doses, use caution in a ministering Librium (chlordiazepoxide hydr chloride) to known addiction-prone individua or those who might increase dosage; withdraw symptoms (including convulsions), followi discontinuation of the drug and similar to tho seen with barbiturates, have been reported. U of any drug in pregnancy, lactation, or in wom of childbearing age requires that its potenti benefits be weighed against its possible hazar As with all anticholinergic drugs, an inhibiti effect on lactation may occur.

PRECAUTIONS: In elderly and debilitate limit dosage to smallest effective amount to pr clude development of ataxia, oversedation confusion (not more than two capsules per d initially; increase gradually as needed and tole

or here.



ed). Though generally not recommended, if mbination therapy with other psychotropics ems indicated, carefully consider individual armacologic effects, particularly in use of po-ntiating drugs such as MAO inhibitors and henothiazines. Observe usual precautions in esence of impaired renal or hepatic function. aradoxical reactions (*e.g.*, excitement, stimula-on and acute rage) have been reported in psy-iatric patients. Employ usual precautions in eatment of anxiety states with evidence of im-ending depression; suicidal tendencies may be esent and protective measures necessary. Vari-le effects on blood coagulation have been ported very rarely in patients receiving the ug and oral anticoagulants; causal relation-ip has not been established clinically.

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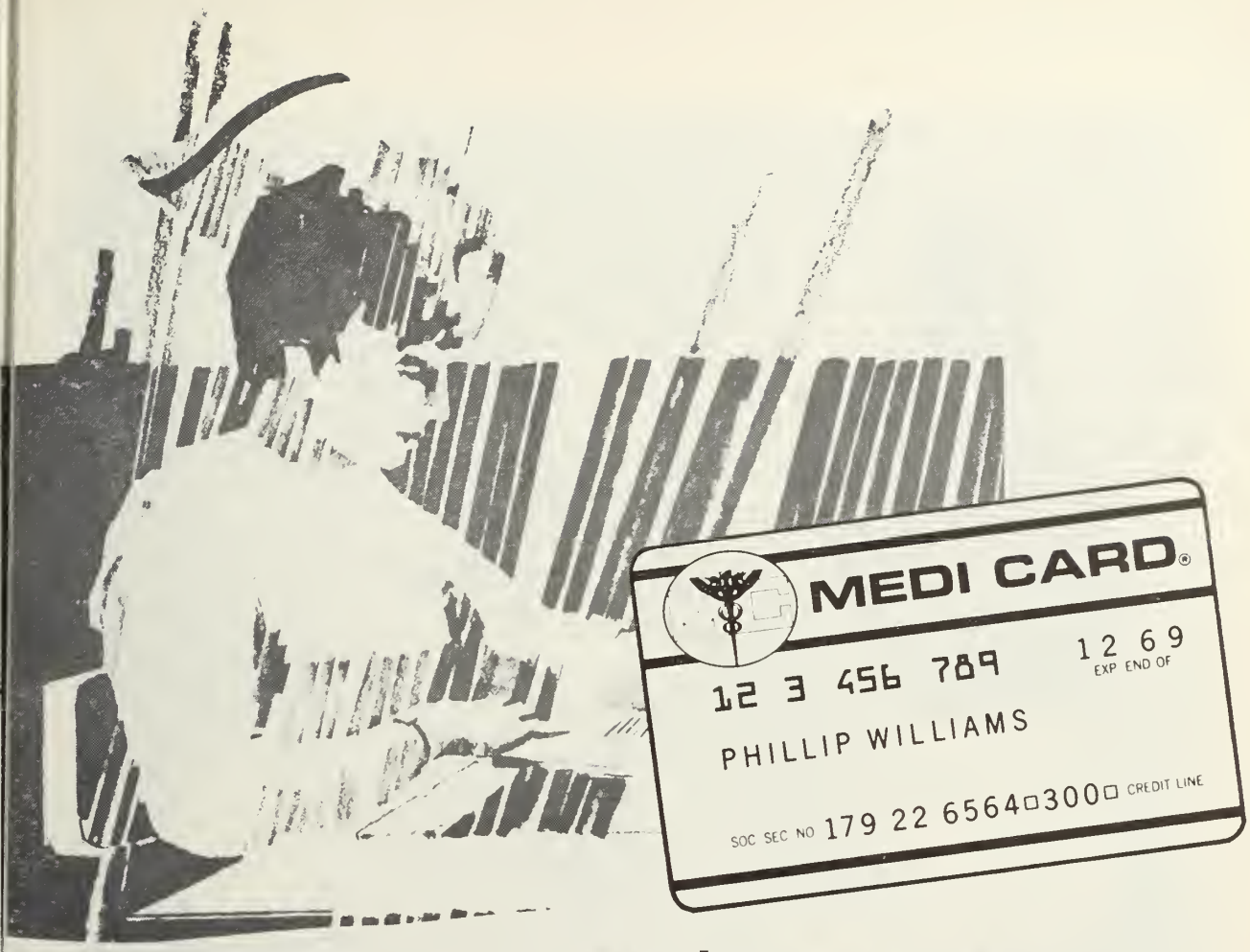
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Perphenazine: Should not be used indiscriminately. Use caution in patients with history of convulsive disorders or severe reactions to other phenothiazines. Likelihood of untoward actions greater with high doses. Closely supervise with any dosage. Side effects may be any of those reported with phenothiazine drugs: blood dyscrasias (pancytopenia, thrombocytopenic purpura, leukopenia, agranulocytosis, eosinophilia); liver damage (jaundice, biliary stasis); extrapyramidal symptoms (opisthotonos, oculogyric crisis, hyperreflexia, dystonia, akathisia, dyskinesia, parkinsonism) usually controlled by the concomitant use of effective antiparkinsonian drugs and/or by reduction in dosage, but sometimes persist after discontinuation of the phenothiazine; severe acute hypotension (of particular concern in patients with mitral insufficiency or pheochromocytoma); skin disorders (photosensitivity, itching, erythema, urticaria, eczema, up to exfoliative dermatitis); other allergic reactions (asthma, laryngeal edema, angioneurotic edema, anaphylactoid reactions); peripheral edema; reversed epinephrine effect; endocrine disturbances (lactation, galactorrhea, disturbances of menstrual cycle); grand mal convulsions; cerebral edema; altered cerebrospinal fluid proteins; polyphagia; paradoxical excitement; photophobia; skin pigmentation; failure of ejaculation; EKG abnormalities (quinidine-like effect); reactivation of psychotic processes; catatonic-like states; autonomic reactions such as dryness of the mouth, headache, nausea, vomiting, constipation, obstipation, urinary frequency, blurred vision, nasal congestion, and a change in the pulse rate; hypnotic effects; pigmentary retinopathy; corneal and lenticular pigmentation; occasional lassitude; muscle weakness; mild insomnia; significant unexplained rise in body temperature may suggest intolerance to perphenazine, in which case discontinue. Antiemetic effect may obscure signs of toxicity due to overdosage of other drugs or make diagnosis of other disorders such as brain tumors or intestinal obstruction difficult. May potentiate central nervous system depressants (opiates, analgesics, antihistamines, barbiturates, alcohol), atropine, heat, and phosphorous insecticides.

Amitriptyline: Careful observation of all patients recommended. Side effects include drowsiness (may occur within the first few days of therapy); dizziness; nausea; excitement; hypotension; fainting; fine tremor; jitteriness; weakness; headache; heartburn; anorexia; increased perspiration; incoordination; allergic-type reactions manifested by skin rash, swelling of face and tongue, itching; numbness and tingling of limbs, including peripheral neuropathy; activation of latent schizophrenia (however, the perphenazine content may prevent this reaction in some cases); epileptiform seizures in chronic schizophrenics; temporary confusion, disturbed concentration, or transient visual hallucinations on high doses; evidence of anticholinergic activity, such as tachycardia, dryness of mouth, blurring of vision, urinary retention, constipation, paralytic ileus; agranulocytosis; jaundice. The antidepressant activity may be evident within 3 or 4 days or may take as long as 30 days to develop adequately, and lack of response sometimes occurs. Response to medication will vary according to severity as well as type of depression present. Elderly patients and adolescents can often be managed on lower dosage levels.

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Multiple Injuries*

B. Bernard Kaye, M.D., Joseph E. Davis, M.D.,** Mario E. Stella, M.D., Thomas J. Sinatra, M.D.** and Jose Dugenio, M.D.***

This report is based on an analysis of seventy-one patients with multiple injuries admitted to Columbus Hospital from March, 1964 to March, 1966.

Columbus Hospital is a 300-bed institution, located in lower Manhattan, with four ambulances covering an area of 6 2/3 square miles. A good percentage of trauma was transported to the hospital from the Bowery, an area notorious for alcoholics and vagrants. The alcoholic was a frequent target for the moving vehicle, and delirium tremens was a common complication. Highway speed was not a causative factor due to the congested local city streets.

The cases were screened in the emergency ward by a full time resident. Injuries were evaluated, emergency care rendered and the serious cases were then transferred to the Intensive Care Unit.

Of the 71 patients, 61 were male and 10 were female. The ages varied from 18 to 87 years of age. Forty-three cases were the result of pedestrians injured by a moving vehicle, seventeen cases resulted from vehicular collisions and eleven cases resulted from falls from various heights. Many of the patients did not have any permanent home, which explains the prolonged period of hospitalization.

An analysis was made of 1.) the fracture sites, 2.) associated injuries and complications, and 3.) cause of deaths.

1. Fracture Sites

Pelvis	50
Tibia and fibula	28
Femur	24
Ribs	23
Acetabulum	18
Humerus	13
Ulna	11
Radius	8
Lumbar vertebrae	8
Sacrum	8
Skull	5
Clavicle	5
Metacarpal	2
Phalanges	2
Zygoma	1
Os Calcis	1
Metatarsal	1

2. Associated Injuries and Complications

Genito-urinary	36
Thoracic (Cardio-pulmonary)	23
Cranio-cerebral	22
Vascular hemorrhage	20
Abdominal	11
Infection	8
Neurological	7
Delayed bone healing	7
Central dislocation head of femur	2
Decubitus ulcers	6
Torn knee ligament	2

3. Cause of Deaths

Pulmonary embolism	4
Myocardial failure	2
Subdural hematoma, postoperative	2
Cerebro-vascular accident	1
Laceration of brain	1
Hemorrhage from a circumferential tear of thoracic aorta with massive mediastinal hematoma	1
Uremia	1

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Traumatic shock, three hours post-admission 1
Cardio-pulmonary derangement 1
Respiratory obstruction 1
Retroperitoneal and intraperitoneal hemorrhage 1

Pulmonary embolism was responsible for 25% of the deaths.

Civilian injuries usually result from vehicular accidents,[1] falls from various heights, and industrial accidents. The mode of force may give a clue as to the type of injury to be anticipated. Steering wheel injuries may be associated with a rupture of the aorta, spleen, esophagus or diaphragm. Falls from great height may result in fractures of the os calcis, the spine and the base of the skull. A crushed pelvis may be associated with injuries to the posterior urethra, bladder and rectum.

Rokkanen,[2] in a series of 512 multiple injury cases, found 65% due to vehicular accidents, 17% were due to falls from a great height, 8% were from falls, 5% were struck by falling objects and 5% were due to miscellaneous causes.

In our series, 61% were due to automobile injuries, 24% were due to automobile collisions, and 15% were from falls. The following is an analysis of the body parts involved.

STRUCK BY CAR – 43 PATIENTS

Fractures
Skull 3
Mandible 1
Zygomatic Arch 1
Clavicle 3
Scapula 1
Multiple Ribs 12
Single Rib 3
Fracture Dislocation Head of Humerus 1
Surgical Neck 3
Humerus Shaft 2
Supracondylar 1
Radius and Ulna 2
Ulna Shaft 1
Dislocation of Elbow 1
Ulna Styloid 1
Metacarpal 1
Phalanges 1
Pelvic Rami 21
Ilium 9
Acetabulum 10
Acetabulum with Central Dislocation . . 2
Intertrochanteric Fracture Femur . . . 2
Greater Trochanter 4
Femur Shaft 6
Femur Shaft-Bilateral 1
Tibia and Fibula 10
Tibia 2
Fibula 1
Tibia Plateau 2
Medial Malleolus 1
Sacrum 4
Transverse Process-Lumbar 5 4
Transverse Process-Lumbar 4 3
Metatarsal 1

Associated Injuries
Airway Obstruction Requiring Tracheostomy 5
Retroperitoneal Hematoma 10
Ruptured Urethra 10
Rupture Urinary Bladder 2
Subdural Hematoma 2
Pneumothorax 2
Myocardial Infarction 1
Tear of Aorta 1
Laceration of Ileum 1
Laceration of Pelvis Vessels and Sigmoid . . 2
Ruptured Collateral Ligament of Knee . . 1

AUTO-COLLISION – 17 PATIENTS

Fractures
Skull 2
Clavicle 2
Multiple Ribs 5
Single Rib 2
Humerus 2
Ulna Shaft 2
Radial Shaft 1
Metacarpal 1
Colles' Fracture 1
Pelvic Rami 6
Pelvic Ramus 4
Ilium 5
Acetabulum 3
Central Dislocation of Hip 1
Intertrochanteric Fracture of Femur . . . 2
Shaft of Femur 3
Greater Trochanter 1
Tibia and Fibula 2
Tibia and Fibula (Bilateral) 1
Lumbar – 5 (Body) 1
Transverse Process 1
Sacrum 2

Associated Injuries
Hemothorax 1
Hemoperitoneum 1
Subdural Hematoma 2
Retroperitoneal Hematoma 1
Airway Obstruction requiring Tracheostomy 4

FALLS – 11 PATIENTS

Fractures
Clavicle 1
Neck of Humerus 2

Shaft of Humerus	2
Olecranon	1
Colles' Fracture	2
Head of Radius	1
Phalanges	1
Multiple Ribs	2
Pelvic Rami	4
Pelvic Ramus	3
Sacrum	2
Ilium	1
Lumbar 5	2
Lumbar 4	1
Acetabulum with Central Displacement	1
Greater Trochanter	1
Tibia and Fibula	2
Intertrochangeric Fracture Femur	2
Shaft of Femur	1
Os Calcis	1
Fibula	1
Associated Injuries	
Retroperitoneal Bleeding	2
Ruptured Bladder	1

The morbidity and mortality are proportionate to the degree of violence and the multiplicity of the injuries. The term, "battered adult syndrome," has been used for massive catastrophies, including airplane disasters, earthquakes, fires, etc.

Although it may be impractical to lay down hard and fast rules governing the management of the multiple injury case, certain principles may serve as a guide for the early recognition and management of unsuspected lesions. The surgeon in charge should coordinate the various medical and surgical specialities. The primary objective is to determine the extent of the injuries in their order of importance, establish a baseline to be utilized for eventual reevaluation, and establish priority of treatment.

The past history may be difficult to obtain in the unconscious or alcoholic patient. The previous use of Insulin, anti-hypertensive, anti-coagulant and steroid drugs requires early recognition and treatment.

Metabolic reaction to trauma[3] involves all essential nutrients. Forty grams of nitrogen may be lost in the urine daily. The increased nitrogen excretion continues through the acute phase of trauma and well into the convalescent period. The NPN concentration of the serum may rise if renal function has decreased. In addition to nitrogen loss, deficits in Phosphorus, Potassium, Sulfur, Calcium and Magnesium will occur. The loss is due to the inactivity of bed rest, tissue destruction and increased needs of the reparative process. Patients under Cortisone therapy may not tolerate the stress of trauma and blood loss, and may require aggressive hormonal replacement during the resuscitation program. Laboratory studies including complete blood chemistry, prothrombin time, plasma and 24-hour urine studies will act as a guide for replacement and corrective therapy.

Chronic alcoholism and impending Delirium Tremens were treated as follows:

1. Diet: High caloric, high carbohydrate and multi vitamins.
2. Fluid Intake: At least 3000 cc daily.
3. Nicotinamide, 500 mg., with meals t.i.d.
4. Brewers Yeast, 3-6 teaspoonfuls, b.i.d. between meals.
5. Sodium Lactate: 500 cc molar solution, p.o., daily.
6. Physiologic salt Solution: 500 cc, p.o. daily.
7. Chlorpromazine, 25-50 mg. t.i.d. pc.
8. Phenobarbital 100 mg P.R.N.

The tremulous hallucinatory, epileptic delirious state resulting from acute intoxication or withdrawal of alcohol required administration of intravenous alcohol.

Initial Evaluation

Initial evaluation must include clinical appraisal of the general condition, the vital signs, and extent of all associated injuries. During this period of evaluation, an open airway must be maintained by manipulation of the mandible or tongue, suction to the upper airways, or tracheostomy. Asphyxia, severe hemorrhage and shock require immediate treatment.[4,5]

If the patient has spontaneous respirations, aspiration of the pharynx and trachea with insertion of an airway may be all that is necessary. The unconscious patient may require an endotracheal tube and assisted respiration. Sucking wounds must be covered, and a flail chest stabilized.

The prompt establishment and maintenance of a patent airway is paramount for proper respiratory support.

Injuries to the head, face, neck, and chest, compromising a free exchange of air requires a tracheostomy. The latter establishes an unobstructed airway, prevents pulmonary complications, provides a route for oxygen administration and inhalation anesthetics.

In this series of multiple injuries, nine patients required tracheostomy.

Hemorrhage must be arrested by local pressure, use of hemostats, or tourniquet control. Interstitial hemorrhage into the thorax, abdomen and retroperitoneal space may be sufficient to cause profound shock. Multiple fractures may result in a circulating blood loss varying between 500 and 3000 cc. during the first 48 hours. The loss varies with the severity of the fracture and the degree of associated soft tissue injury. Concealed interstitial hemorrhage is deceiving, particularly in fractures with surrounding soft tissues. Pelvis and femoral fractures may result in 1,000 cc. blood loss.[6] Addition of the blood loss for each fracture may be helpful in determining the amount of replacement therapy necessary in the multiple fracture case.

Severe shock will produce renal ischemia. Replacement therapy is required to restore renal blood flow and function which are measured in terms of hourly urine output. Urine flow is restored by adequate infusion when

given early for low blood volume with decreased glomerular filtration rate and some continuing renal vasoconstriction.

Renal hypothermia will protect the kidney from damage during the period of ischemia and will reduce renal complications induced by total ischemia during surgical procedures.

Volume replacement therapy must be prompt to restore the circulating blood volume and provide erythrocytes to handle the oxygen and carbon dioxide requirements of the tissues. When whole blood is not available, Colloid (albumen, plasma, dextran) and salt solution (Ringer's Lactate) are used.

Severe soft tissue injury and crush injury floods the kidneys with myoglobin released from the muscle. Fluid is lost into the crushed tissues with compensatory vasoconstriction. The myoglobin molecule filters through the glomerulus and appears in the urine. The cause of renal failure is not clear. Widespread tubular obstruction must be one of the factors for casts of precipitated myoglobin are seen in the tubular lumens. Therapy is instituted to prevent renal shutdown and correct electrolyte imbalance, following severe damage to the soft tissues. Electrolyte solution is utilized to maintain electrolyte balance. Renal output, electrolyte studies and C V P monitoring will determine the amount of fluid necessary.

In acute stress, the rate of urine flow is directly proportionate to the tissue perfusion of the kidney. Normal urine rate of 25 to 50 cc per hour implies adequate kidney perfusion and adequate tissue perfusion in other organs.

If the urinary output falls below 20 cc per hour, then hydration is inadequate and renal failure is imminent. The addition of 12.5 gm Mannitol in each 1000 cc of Ringer's Lactate solution if given within two hours following injury, will prevent actute renal failure in the form of acute tubular necrosis.

The measurement of urinary sodium concentration has been found to be useful in determining renal tubular function. In a situation in which renal plasma flow has been compromised, maximal aldosterone effect can be expected. Thus, if the sodium concentration in the urine is less than 20 meq./L, the kidneys are still responding to aldosterone and at that moment, at least tubular function is still maintained. But if the concentration of sodium in the urine is 30 meq/L or more – (usually over 50 meq/L) the tubules are damaged and unable to respond to a maximal stimulus from aldosterone.

Deficient cardiac output can be caused by central cardiac failure, an increase in peripheral resistance, a decrease in the venous return or any combination of these.

With the C V P elevated to 10 cm. or more, the heart already has failed to handle the current venous return adequately and blood volume expanders are ineffective in restoring cardiac output even though the measured blood volume may be significantly reduced 25%-50% below the normal volume.

Hypovolemia and cardiac insufficiency are characterized by a decrease in cardiac output and are differentiated from one another by C V P monitoring.

Deficient vascular tone is characterized by arterial hypotension without decrease in cardiac output or hypotension out of proportion to any decrease in cardiac output.

The central venous pressure provides the most useful guide to the state of the blood volume, assuming that the cardiac efficiency is excellent.

A large gauge needle is inserted into a vein and infusion of Ringer's Lactate solution, 1000-2000 cc is started immediately. This is a therapeutic test to determine the degree of blood loss. The need for further fluid therapy will be determined by the restoration of blood pressure and stabilization of the vital signs. A balanced salt solution is preferable to other types of fluid to restore the depleted interstitial fluid and sodium mass, since there is translocation of extracellular fluid in hemorrhagic shock with a contraction of the extracellular space which can be corrected by a balanced salt solution infused in a large amount. This will restore and support the blood volume after loss of whole blood.

Shires[7] also recommends that patients in hemorrhagic shock be given 5% of their body weight of balanced salt solution before or with blood transfusion. Experimental evidence supports the more beneficial effects of giving the combination of Ringer's Lactate plus half the lost blood of the patient, then when only Ringer's Lactate is given alone.

Current studies demonstrate that loss of 50% of blood volume can be safely replaced by balanced salt solution at a ratio of 4:1 with immediate but not long term survival.

The primary therapy for hemorrhagic shock is adequate blood replacement. Transient replacements as Dextran is superior to buffered saline in replacing blood loss in unshocked animals but not in resuscitating shocked animals.

Head Injuries

Cranio-cerebral injuries and complications occurred in twenty-two cases, including five skull fractures. Cranio-cerebral trauma, combined with multiple injuries, presents a problem with respect to diagnosis and treatment of coexisting injuries.[8]

Examination of the skull may reveal edema of the scalp suggestive of underlying fractures, Battle's sign resulting from a fracture of the Temporal bone or bilateral medial orbital ecchymoses suggesting an anterior basal skull fracture. The nose and ears should be examined for blood or cerebrospinal leakage.[9]

An unconscious state often masks symptoms of serious injury and causes delay in the early management of injuries otherwise amenable to early recognition and treatment.

Unconsciousness from a concussion is usually brief with normal respirations and normal pupillary and cor-

neal reflexes. This may be followed by a period of confusion, post-traumatic and retrograde amnesia.

Frequent evaluation of the level of consciousness and vital signs may act as a guide to the severity of the head injury. Changes in the state of consciousness and positive neurological findings are clues as to the extent and to the progress of the brain injury, and may influence the course of therapy as regards coexisting injuries.

Cerebral angiography has considerably improved the assessment of the severity of cerebral injuries, thus facilitating the planning of therapeutic measures.[10]

Depressed skull fractures, extradural bleeding and space-occupying hematomata require surgical intervention.

Chest Injuries

Thoracic injuries occurred in twenty-three cases. The restoration of pulmonary ventilation requires priority of treatment, as retained bronchial secretions, open sucking wounds, tension thorax, massive bleeding into the pleura, and cardiac tamponade produce disturbances in cardio-respiratory physiology. The thoracic injury contributes to asphyxia and shock, and therefore demands priority of treatment in the multiple injury case.

Crush injuries of the chest associated with paradoxical movement present a difficult problem because of the derangement of the cardio-respiratory physiology. A flail chest may require skeletal traction to stabilize the chest wall, or a cuffed tracheotomy tube with the use of positive pressure respirator. Paravertebral blocks will control the pain and help maintain an adequate oxygen exchange. Sternal fractures may result in pulmonary, cardiac, vascular or esophageal trauma.

Abdominal Injuries

Abdominal injuries other than urologic occurred in eleven cases. The significance of abdominal injuries in the treatment of the multiple injury case is great, not because of the frequent occurrence, but because of the vital importance of accurate diagnosis and immediate treatment.[11]

Non-penetrating trauma may give rise to a variety of lesions and may be overshadowed by more pronounced symptoms associated with other injuries to the head, chest or extremities. Penetrating wounds should be explored as soon as the general condition of the patient is stabilized. Paracentesis of the four quadrants with an 18 gauge spinal needle may be of diagnostic value in non-penetrating injuries. Ruptured solid and hollow viscera, diaphragmatic, mesenteric, bladder and extensive intra and retroperitoneal hemorrhage may present difficult diagnostic problems. An abdominal injury may be obscured by unconsciousness due to a cerebral lesion or by disorientation resulting from shock.

Urologic Injuries

The genito-urinary tract was involved in thirty-six of the cases. In most of the injuries to the pelvic bones, either the bladder or urethra was injured. Trauma to the kidneys was less common due to the relatively protected position beneath the rib case and within a well developed fat pad.

The management of bladder and urethral injuries requires early recognition and immediate treatment. Attention is directed toward combating shock and hemorrhage and at the same time an attempt is made to reestablish the continuity of the urinary tract. With severe crushing fractures of the pelvis,[12] fragments of pubic and ischial rami are displaced medially, posteriorly and downward, tearing the triangular ligament and its enclosed structures, including the membranous urethra, pudendal vessels and the sphincter muscle in the urogenital diaphragm. Fragments of these bones may be driven into the urinary bladder, tearing its wall either anteriorly or inferiorly, lateral to the trigone and usually outside the peritoneum.

Blood at the urethral meatus indicates injury of the urethra or bladder. There may be diffuse abdominal tenderness and rigidity. If the urethra is ruptured, the bladder may still be intact and may be palpable as a rounded mass in the lower abdomen. Very often rectal examination will indicate that the prostate gland is not palpable. This indicates that the prostate and bladder have been torn from their attachments and displaced upward by retropubic bleeding. When injury is suspected, aseptic catheterization is indicated to reestablish continuity of the lower urinary tract. If a catheter cannot be passed, a urethrogram should be performed to visualize the site of injury. If a catheter can be passed into the bladder, it should be left indwelling and a measured amount of contrast medium instilled into the bladder, and cystography performed to indicate evidence of bladder injury.

The treatment of bladder or urethral injury consists of suprapubic cystostomy with drainage of the surrounding spaces, ligation of any obvious bleeding points, and reestablishment of the continuity of the urethra. Exploration of the peritoneal cavity is essential to rule out intra-abdominal injury. Continuity of the urethra is maintained with the urethral catheter for a period of two to three weeks.

The management of renal injuries will depend upon the accurate assessment of the intravenous pyelogram and arteriography studies. Indications for surgical intervention are persistent hemorrhage, perinephric urinary extravasation and infection, and late complications such as scarring of the collecting systems with urinary obstruction, hypertension and stone formation.

Fractures

The presence of skeletal injuries is a common feature in the multiple injury case. Multiple injuries may overshadow co-existing fractures, and the presence of fractures and associated vascular and peripheral nerve injuries must be ascertained during the initial examination.

Open fractures, displaced fractures and dislocations are

given preferential treatment. Sterile coverage of the open wound and emergency splinting of the fracture is utilized until physiological balance has been established, and the extent and severity of co-existing injuries have been determined.

Local splinting prevents shock, and reduction should be performed as soon as the general condition has been stabilized.[13] Dislocations of the vertebral column, hip joints and knee joints require immediate reduction. Repeated evaluation may reveal unrecognized fractures or dislocations which were not apparent at the initial examination.

The age of the patient, general condition, and stability of the fracture will determine the choice of plaster, traction or internal fixation. Stable osteosynthesis will facilitate management of co-existing injuries, nursing care, early joint mobilization, early ambulation and expedite the disability period.

Anticoagulant therapy is instituted in the multiple fracture case necessitating prolonged bed confinement, only after thorough assessment of its potential.

A physical rehabilitation program is instituted as soon as the soft tissues and the fractures permit.

Summary

1. Treatment of multiple injuries requires coordination of the various medical and surgical specialties from the time of admission to the time of discharge from the hospital.

2. Initial evaluation is carried out in the emergency ward to determine the extent of the injuries and establish priority of treatment.

3. Emergency care is rendered for asphyxia, hemorrhage and shock. Priority is extended to dislocations compromising neuro-vascular structures.

4. Blood is drawn for baseline determination, a catheter is inserted into the urinary bladder and intravenous therapy is started to maintain electrolyte balance and prevent renal shutdown.

5. Therapy is instituted to counteract the previous use of drugs or alcohol.

6. Definitive fracture treatment may be deferred until the various systems have been returned to their normal physiological state.

7. Cranial, thoracic, abdominal and musculo-skeletal trauma can be treated simultaneously when the various systems have been stabilized.

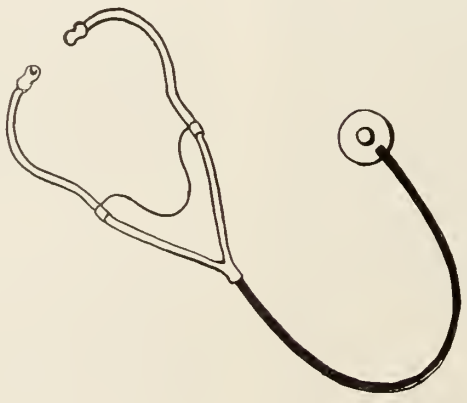
8. Clinical reevaluation is repeated for injuries undetected at the initial examination.

9. Early mobilization of the patient is mandatory to prevent venous stasis, protein loss, decubitus ulcers and joint dysfunction. Anticoagulant therapy is instituted in the multiple fracture case necessitating prolonged immobilization.

10. An intensive rehabilitation program is instituted as soon as the soft tissue and skeletal injuries will tolerate active motion.

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The Management of Behavior Disorders with Thioridazine in the Mentally Retarded

ALDO F. LLORENTE, M.D.

INTRODUCTION

New and epochal advances in etiologic understanding, diagnosis and treatment of mental retardation have been achieved in recent years through improving research and clinical practices.[8] Inspiring indeed to clinicians, parents of mental retardates, and patients are the decidedly successful innovations in management of the 3 percent of our population who are "disadvantaged" by existence at the "lower end of the continuous spectrum of mental ability."[8]

Prominent among recent therapeutic developments is the recognition of the usefulness of tranquilizing drugs in modulating emotional disturbances and other manifestations contributing to abnormal behavior.[6,11] The effectiveness of the phenothiazines, notably thioridazine,[1-3,5,9] in controlling the behavior disorders commonly impeding management of mental retardation has generated increasing clinical application. Preliminary trials with thioridazine* indicated a potential for improvement not obtained with previously used phenothiazines. Thus, to better assess the effects of this agent, a retrospective study derived from medical records of this center† was undertaken.

MATERIAL AND METHODS

The group selected for study comprised 65 mentally retarded patients, 39 females and 26 males. Ages ranged from 7 to 63 years, and I.Q.'s from 6 to 80. Approximately half of the group was profoundly to moderately retarded. A majority of the patients had histories of organic brain damage or encephalopathies associated with prenatal pathology or birth trauma. Endocrinologic dysfunction, psychogenic factors, genetic factors and sociocultural deprivation were variously involved in the pathologic status in a number of patients. Twenty-one of the mental retardates had convulsive disorders. All of the patients exhibited a social behavior which varied from overt acts of aggressiveness, assaultiveness, self-abuse and temper tantrums on various occasions to extreme withdrawal and inactivity on other occasions. Prior to the institution of thioridazine, 16 patients required some form of physical restraint.

Of the 65 patients in this series, 38 had been treated with one or more tranquilizers other than thioridazine and had failed to respond adequately. Eight of the remaining 27 patients had received thioridazine previously, while 19 had not been treated with a tranquilizing drug.

TABLE 1

COMPARISON OF PRE- AND POST-TREATMENT AVERAGES FOR EACH TARGET SYMPTOM IN 65 PATIENTS

	Average Scores			*Level of*
	Pre-evaluation	*Post-evaluation*	*Student's t*	*Significance (p)*
Incontinence	1.092	0.876	2.674	.005
Aggressiveness	2.753	1.123	10.346	.001
Hyperkinesia	1.830	0.507	5.294	.001
Withdrawal	1.169	0.338	4.236	.001
Self Abuse	1.169	0.353	4.577	.001
Assaultiveness	2.276	0.876	6.909	.001
Temper Tantrums	2.200	0.846	8.006	.001

The dosage of thioridazine ranged from 100 to 800 mg daily, and was adjusted within this range according to the needs of the individual. Most patients received 150 to 300 mg per day. No alteration in the treatment program, e.g., psychotherapy and ward milieu, occurred during the period of treatment with thioridazine. All epileptic patients were maintained on their usual anticonvulsant medication.

Data relating to patients' symptomatology had been recorded regularly by medical and nursing personnel during patients' treatment with thioridazine. Thus, substantial information on patient progress and drug effect was available. From this, patient behavior before and after treatment was rated on a 7-item scale. Each item could receive scores ranging from 0, for no or minimal pathology, to 4, for very severe manifestations. In addition, a determination of mood as indicated by data on frequency and intensity of temper tantrums or of withdrawal was recorded. The incidence of seizures before and after treatment was also noted.

RESULTS

As shown by Table 1, all symptoms improved but the drug was particularly effective in controlling aggressiveness, hyperkinetic activity, assaultiveness and temper tantrums. This is derived from the statistical analysis that was made of the average ratings for each item before and at the conclusion of treatment. For this purpose the Student t-test was applied and this revealed significant improvement for each of the target symptoms. The probability that the average improvement was due to change was unusually remote as can be seen from the values, which range from 5 in 1000 to 1 in 1000. Further, there was a detectable change in attitude of patients whereby they demonstrated a better sense of participa-

*MELLARIL,® Sandoz Pharmaceuticals.

†Pineland Hospital and Training Center, Pownal, Maine 04069.

tion in activities and lifting of apathy which had characterized performance before thioridazine.

No increase occurred in the incidence of seizures in those patients with convulsive disorders. In fact, there was a reduction in number and severity of seizures in 3 patients. Of the 16 patients previously requiring physical restraint, 4 improved sufficiently to eliminate the need for restraint, while in 9 patients necessity for restraint was markedly reduced; in three patients no change was obtained.

During previous treatment with other ataractics, 4 patients had exhibited increased urobilinogen suggestive of impaired liver function. No such abnormality was encountered in these patients following the changeover to thioridazine. Also, during prior treatment with another ataractic, extrapyramidal symptoms had occurred in 3 patients; these symptoms disappeared in 2 patients during treatment with thioridazine. The remaining patient continued to receive an antiparkinson drug for control of the symptoms.

Discussion

Emotional and social factors are now receiving necessary consideration in programs of rehabilitation of the mentally retarded.[1,8] Important roles in such disability are played by severe emotional disturbances and associated behavioral abnormalities – and these are today clearly recognized to block normal participation in social activities.[1] Just what proportion of the almost 6 million retarded members of our population suffer social and cultural deprivation primarily or largely because of abnormal behavior now significantly controllable by appropriate therapy is a great unknown. In an estimated 75-80 percent of mental retardates, no organic causes for mental deficiency are detectable by available techniques despite revolutionary genetic and biochemical progress.[8]

Marked improvement in management has been made possible by introduction of the phenothiazines that contribute to the control of abnormal behavior and thus facilitate and augment psychotherapy, training and other basic approaches to rehabilitation. As in other series of drugs, important distinctions have been demonstrated among the phenothiazines in regard to scope and degree of effectiveness in particular disorders and in the nature and incidence of side effects.[6,8] Relative intensity with which an undesirable tendency is most frequently expressed may be a crucial consideration.[6,10]

The present study demonstrates that thioridazine was highly effective in the amelioration of the emotional and behavioral status of mental retardates, and devoid of toxicity, important considerations in the management of such patients. The capacity of thioridazine to control target symptoms such as temper tantrums, hyperkinetic activity, aggressiveness and assaultiveness represents a decidedly favorable influence on the rehabilitation potential of the retardates. This was evidenced by the lifting of despondency and bettering of attitude, with increased participation in social activities. These observations augment other reports of comparable improvement with thioridazine in mildly to severely retarded patients.

This change of mood was manifested without the dulling effects usually encountered with other phenothiazines. The reduction in extrapyramidal stimulation is in keeping with the consensus that thioridazine has less tendency to give rise to this side effect.[6,7,10] No patients showed any disturbance of hepatic function, and abnormal urobilinogen levels in four patients previously treated with other ataractics subsided after institution of thioridazine. Results of concurrent use of this drug and anticonvulsants in patients with convulsive disorders were satisfactory, in accord with the observations of other clinicians.[4,12] The reduction in the need for restraints would appear to emphasize the calmative effects of the drug on mental retardates.

As a basically important generality, it would seem that the potential for control of abnormal behavior in mental retardates treated with thioridazine can facilitate overall management. Patient tractability is enhanced with marked improvement of interpersonal relationships. The demands upon the staff are markedly lessened, providing more time and energy for furtherance of training, education and realization of inherent potentialities formerly masked or blocked by behavioral deviations. Thus, effective tranquilization represents a valuable contribution to advancement of other measures directed toward optimal rehabilitation of the great majority of mental retardates manifesting emotional disturbances and abnormal behavior.

Summary

In a series of 65 mental retardates ranging in age from 7 to 63 years, all exhibiting marked behavioral abnormalities and associated intractability, thioridazine effected a significant reduction in the frequency and intensity of target symptoms, notably temper tantrums, hyperkinetic activity, aggressiveness and assaultiveness.

The absence of dulling effects contributed to the improvement in attitude and mood and increased participation in social activities. The need for restraints was reduced. In patients with convulsive disorders, concomitant use of thioridazine and anticonvulsants was employed to advantage.

Disturbance of hepatic function or extrapyramidal stimulation attributable to thioridazine was not observed. Freedom from side effects is important in treatment of the mentally retarded who are emotionally labile, with associated behavioral deviations.

The resultant increased tractability, lightened the workload of the staff and augmented the favorable influence of many phases of the overall management program. Thioridazine offers an unusual potential for amelioration of emotional, behavioral and social phases of the disability shown by mental retardates.

ACKNOWLEDGEMENT

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MEDICAL STAFF MEMBERSHIP AND STATUS OF ALLIED HEALTH PROFESSIONALS IN HOSPITALS

A joint AMA-AHA statement provides useful guidelines for hospitals and medical staffs in establishing a proper relationship between the medical staff and certain allied health professionals who participate in hospital patient care. The statement, which was adopted by the AMA House of Delegates at its Annual Convention in New York City, reads as follows:

"1. There should be only one organized medical staff in a hospital, governed by a single set of bylaws adopted by the staff members and approved by the governing authority of the hospital. Medical staff membership should be limited to competent and qualified physicians and surgeons with unlimited licenses to practice, and dentists, in accordance with the medical staff bylaws.

"2. The services of certain allied health professionals may be made available for patient care as medical staff affiliates within the limits of their skills and the scope of their lawful practice. Their eligibility in general shall be determined on the basis of the following criteria:

"a. They exercise independent judgment within their areas of competence, provided that a member of the medical staff shall have the ultimate responsibility for patient care.

"b. They participate directly in the management of patients under the general supervision or direction of a member of the medical staff.

"c. They record reports and progress notes on patients' records and write orders to the extent established by the medical staff.

"d. They perform consultations in conformity with the applicable provisions of the medical staff bylaws.

"3. It is the obligation of the medical staff of the hospital to recommend to the governing authority the extent of responsibility that may be assumed by members of these allied health professions. To carry out this obligation, the following procedures should be established and provided for in the medical staff bylaws:

"a. The medical staff should determine the general qualifications to be required of members of each category of allied professionals.

"b. Applications for appointment and privileges should be processed through the same channels as those for medical staff membership and privileges.

"c. Privileges should be considered and specified by the medical staff for each individual, based upon his professional training, experience, and demonstrated competency.

"4. Members of these allied health professions should be individually assigned to an appropriate clinical department as staff affiliates and should carry out their professional activities subject to departmental policies and procedures. The bylaws of the medical staff must establish this organizational pattern and relationship. An affiliate or adjunct staff should not be established as an organizational entity." — **Medical Staff-in-Action**, Aug. 1969, Vol. 4, No. 4

Oak Ridge Institute and Nuclear Medical Technology

NORMAN C. POWERS, R.T.*

A growing demand for personnel able to utilize radioactive materials safely has been created by the ever increasing applications of radiation and radioisotopes in medicine, research and industry. Physicians, for example, now use radioisotopes routinely for many types of diagnosis and therapy.

Under contract with the U.S. Atomic Energy Commission, the Special Training Division of Oak Ridge Associated Universities regularly offers specialized courses of instruction in the use of radioisotopes.

I recently returned from Oak Ridge after participating in a four week Nuclear Medicine Technician Training course. The first week was registration in the course followed with lectures on orientation, radiation safety, introduction to physical concepts, mathematics review, gamma interactions, scintillation detectors, gamma ray spectrum analysis, characterization and detection of particles, radiation quantity and units, statistics, health physics and radiation safety. These lectures were followed by laboratory exercises in gamma ray spectrum analysis, characterization and detection of particles, statistics, and radiation quantity and units.

The second week consisted of classroom lectures on nuclide modes of decay, multichannel spectrometry, survey detection instruments, assaying gamma emitting nuclides, rate meters and recorders, liquid scintillation counting, radio-purity of pharmaceuticals and T^3, T^4 in vitro tests. Laboratory exercises were given in survey instruments, gamma emitters, liquid scintillation counting, radio purity and in vitro testing.

The third week involved the practical application of various devices with fewer lecture hours. This week began with an orientation to imaging devices for organ scanning, focus and non-focus collimation, scanner and its parts, scintillation camera, whole body counting, camera and Magna Scanner scanning, calibration of instruments, nuclide generators, contamination problems, and isotope dilution.

The fourth and final week was devoted mostly to laboratory in vitro procedures. These were Ferrokinetic studies (iron metabolism, RBC mass and survival), urinary excretion (Schilling's), blood volume, radioisotope in G.I. disorders, renograms, selection of instruments, and radiation safety. After completion of the first week of study, there was a review and test. The review and final test was the fourth week prior to graduation.

The course was, in all aspects, very informative, and gave basic clarity and detail to most subjects covered. The benefits derived varied among the students, depending on interest, background and previous training. Since I am involved in rectilinear scanning and handling isotopes only, I found the laboratory in vitro procedures especially helpful. The newest advances in instrumentation were available. This I also found very helpful because it simplifies the training required prior to the installation of such new equipment. Computation of dosages, isotope safe-handling, instrument calibration, personnel and area survey monitoring were areas covered in detail giving a technician basic sound training aligned with his usual function and responsibility in an isotope department. The last two weeks of the course, the technician could spend more time in laboratory in vitro studies, rectilinear scanning, camera dynamic studies, or liquid scintillation. This enabled the technician to gain valuable practical experience.

This course is programmed for the technician who has been employed for at least a year in an isotope department. The course is four weeks with eight hours of combined laboratory and lectures each day, five days a week. The technician with very little or no isotope experience would find the course so accelerated that much of the material covered would be difficult. For the registered x-ray or laboratory technician who has some experience in isotopes and desires to make it a career, this course, in my opinion, would round out his training. It would give the technician the type of training necessary to function more adequately and assume the many responsibilities delegated to him by the physician. The hospital physician, in turn, would benefit by the technician's improved knowledge and performance.

By no means do I mean to imply that this training should replace a two year course. However, I believe this program enables the physicians and hospitals to provide their technicians with some formal training with only a short absence from employment, and at a minimal cost. Further information concerning the Nuclear Medicine programs may be obtained by writing to:

Oak Ridge Associated University
Special Training Division
P. O. Box #117
Oak Ridge, Tennessee 37830.

*Norman C. Powers, R.T. Chief Nuclear Medicine Technologist, Department of Radiology and Nuclear Medicine, Augusta General Hospital, Augusta Maine 04430.

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We wish to thank Drs. Marcia K. Bilbao, Louis H. Frische, Josef Rösch and Charles T. Dotter for this exceptionally graphic example of hypotonic duodenography.

Contraindications: Glaucoma, severe cardiac disease.

Precautions: Since varying degrees of urinary hesitancy may occur in elderly men with prostatic hypertrophy, this should be watched for in such patients until they have gained some experience with the drug. Although never reported, theoretically a curare-like action may occur with possible loss of voluntary muscle control. Such patients should receive prompt and continuing artificial respiration until the drug effect has been exhausted.

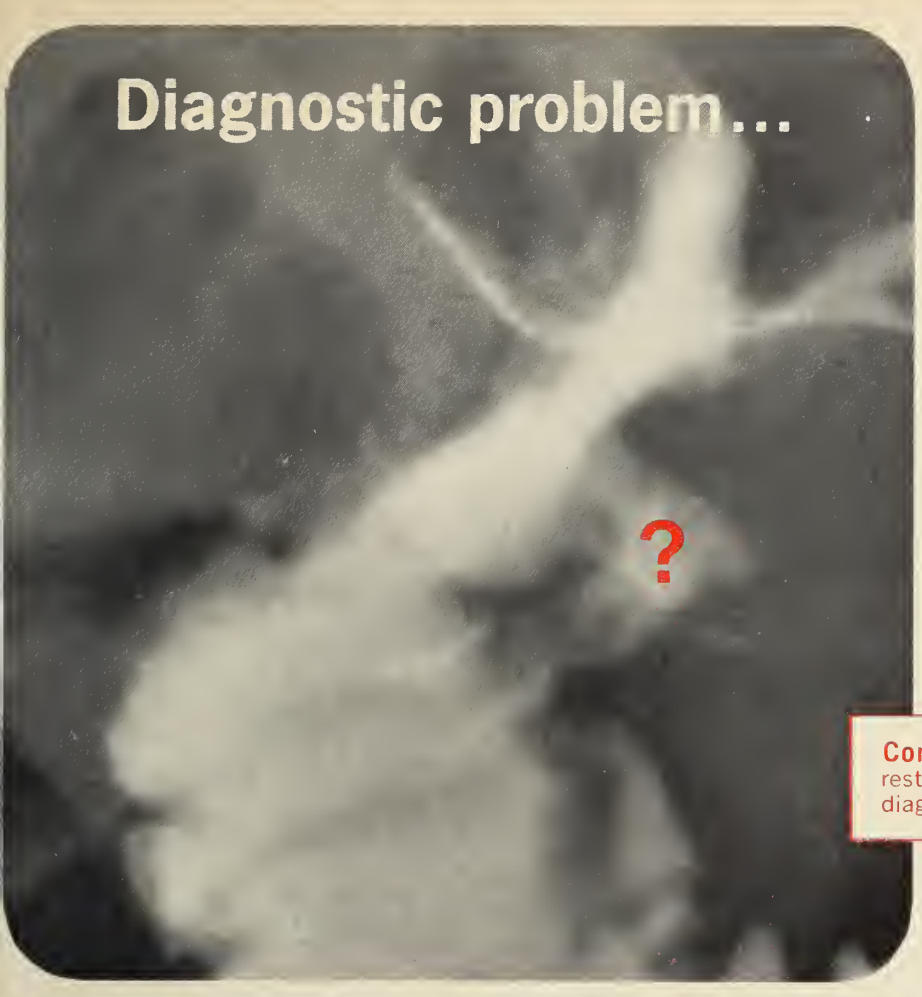
Side Effects: The more common side effects, in order of incidence, are xerostomia, mydriasis, hesitancy of urination and gastric fullness.

Dosage: The maximal dosage tolerated without excessive side effects is usually the most effective. For most adult patients this will be four to six 15-mg. tablets daily in divided doses. In severe conditions as many as two 15-mg. tablets four to six times daily may be required. Pro-Banthine (brand of propantheline bromide) is supplied as tablets of 15 mg., as prolonged-acting tablets of 30 mg. and, for parenteral use, as serum-type vials of 30 mg. The parenteral dose should be adjusted to the patient's requirement and may be up to 30 mg. or more every six hours, intramuscularly or intravenously.

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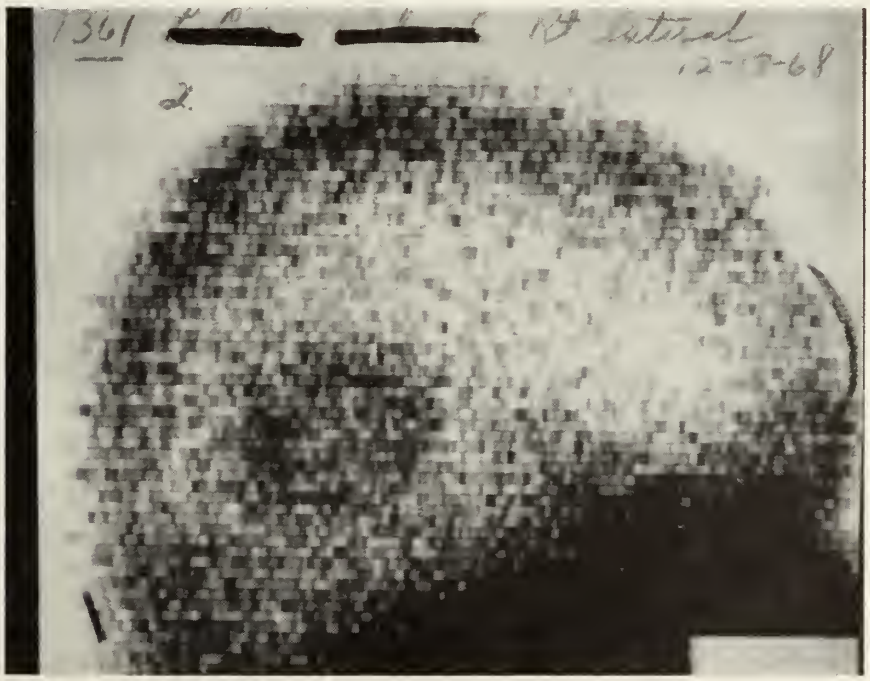
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X-Ray Of The Month

This is a 26-year-old white male who 2 months previously was in skeletal traction for a fractured cervical spine. He developed an osteomyelitis at one of the tong sites, and was admitted to Maine Medical Center following a seizure and complaining of headaches. A brain scan was done.



The "Doughnut" Sign

In brain scanning, the appearance of a central area of decreased radioactivity within an area of increased activity is referred to as the "doughnut" sign. This finding is most probably of little diagnostic or prognostic significance, as it indicates only the presence of central necrosis, hemorrhage, or cyst formation within the lesion visualized. The three pathologic entities most frequently responsible for the "doughnut" sign are brain abscess, glioblastoma, and metastatic intracerebral neoplasm. Incidence of the "doughnut" sign appears to be from two to ten percent of positive brain scans.[1] In this particular patient, the lesion proved to be a brain abscess.

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AMERICAN CANCER SOCIETY - MAINE DIVISION, INC.

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Cancer Quackery

Surveys show that more Americans would rather cure cancer than reach the moon. Not too many Americans would invest in an untested vehicle for space travel, but worthless cancer remedies are supported with millions of dollars annually.

The cost of such useless treatments in dollars is slight compared with the toll in human suffering and death. "This is real tragedy," an American Cancer Society report stated. " A patient with curable cancer may be turning himself over to certain death." Successful treatment of cancer depends on early diagnosis and proper treatment. The patient who allows his cancer to become advanced while seeking or tying a worthless remedy is therefore in great peril.

Approximately 1.5 million Americans alive today are cured of cancer yet the primitive, unfounded fear that all cancers are incurable, or of surgery or radiation treatments, or that the doctor has given up hope, can lead patients and their families to seek out unproven methods of treatment ranging from ordinary fruit juice to sophisticated-appearing equipment and devices.

The purveyor of such cancer "cures" can be an illiterate or occasionally can be a physician or scientist functioning in an unfamiliar field. There is no end to the scientific jargon that has been used to justify unproven methods to a public which is confused, especially when frightened.

How then is the public protected? In 1962, the Pure Food, Drug and Cosmetic Act was strenghtened by the Kefauver-Harris amendments which place the burden of proof upon the proponent of a remedy. If he wishes to distribute an unproven remedy for investigational purposes in interstate commerce, he must file an acceptable plan for such investigation with the Federal Food and Drug Administration. State legislation to control worthless cancer remedies within state boundaries has been passed in only seven states.

In California — the first state to pass this type of legislation in 1959 — diagnostic and therapeutic means for cancer treatment are subject to scrutiny and must be scientifically sound. The State Health Department has a unit through which evidence can be assembled, testing and investigation conducted, and recommendations for legal action made to a special advisory council. The adoption of regulations to outlaw fraudulent agents is part of the authority of the State Board of Public Health. The American Cancer Society has available a model state law for those who wish to consider legislation to be enacted in their states.

Last year, the Society published an eight-point guide for use by its 58 Divisions when a community problem concerning new or unproven methods arises. The American Cancer Society is a fountainhead of information on new and unproven methods. Each year, about 2,500 items are added to its files. Carefully researched statements on specific new and unproven methods are included in the Society's "CA — A Cancer Journal for Clinicians," the medical journal with the largest circulation in the United States.

Various agencies participate in the investigation of new claims of remedies. They include: the National Cancer Institute, American Medical Association, Federal Food and Drug Administration, U. S. Public Health Service, certain reliable research agencies and independent, scientifically trained cancer investigators.

But investigation and legislative action are not the only means of control over the cancer quack. An informed public could put him out of business. American Cancer Society volunteer speakers, pamphlets and exhibits bring the true story of the cost of quackery to the public.

Now, for the first time, the Society has produced a film on the subject. Entitled "Journey Into Darkness," it is designed for use on television and at group screenings. It features noted actor Robert Ryan as narrator.

However, the cancer quack has an outstanding communications network at work for him. News of his "cures" is spread by the neighbors and friends of cancer patients. Sensational mass circulation magazines, always on the lookout for the controversial, carry stories of his work. Proponents of bizarre remedies are naturals for radio and television interview shows. In addition, between 1960-65, at least eight books describing the "favorable results" obtained with specific unproven methods were published.

Information on new or unproven methods reaches the public through meetings and other activities of "health" organizations which are in opposition to what they call the "medical monopoly." Among these are the International Association of Cancer Victims and Friends, Inc., and the National Health Federation.

Sometimes prominent individuals — members of Congress, entertainers — favor unproven remedies with their prestige.

Many congressmen have been involved in this field. In fact, as far back as 1748, the House of Burgesses of the General Assembly of Virginia — including George Washington and James Madison as members — passed a resolution appointing a committee to make a trial of Mary Johnson's "receipt of curing cancer," consisting of garden sorrel, celandine, persimmon bark and spring water. Testimonials of witnesses so treated were read into the minutes and Mrs. Johnson received an award of 100 pounds.

The layman can protect himself against the cancer quack in several ways. He can consult his local Unit of the American Cancer Society or the county medical society for exact information. He can be on the lookout for one or more of these common traits of cancer quacks:

. . . they guarantee a cure in all or at least in a vast majority of cases;
. . . their "cures" are secret;
. . . their "cures" are "natural" or based on some principle supposedly overlooked by all other researchers;
. . . they present testimonials;
. . . they claim that they are being persecuted by the "medical monopoly" or are generally being conspired against;
. . . they are avid for publicity and advertise their wares far and wide.

American Cancer Society News Service Release.

Maine Medical Association

SPECIAL COMMITTEES 1969-1970

Special Committees for 1969-1970 as appointed by the President, Charles F. Branch, M.D. of Auburn.

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Continued on Page 240

DEAN H. FISHER, M.D.
COMMISSIONER

State Of Maine
Department of Health and Welfare

The Epidemiology of Infectious Syphilis

CHARLES LINDMAN*

Since the early part of 1964, the Venereal Disease Control Section of the Department of Health and Welfare has conducted an intensive epidemiologic evaluation of all reported cases of primary, secondary and early latent syphilis.

Because a syphilis vaccine is still not available, we must continue to rely upon epidemiology as one of our major weapons to achieve the practical eradication of syphilis. Many public health officials have doubted that this can be accomplished for a variety of reasons, not the least of which is that no major communicable disease of man has ever been eliminated solely by the tracing and treatment of infected individuals. Some areas of the nation, Maine included, have achieved a level of practical eradication and are now engaged in a surveillance program as a means of preserving the gains which have been made.

Routinely, cases of syphilis are brought to the attention of the Bureau's Venereal Disease Control representatives by confidential case reports sent in by the private physician and via a report of a reactive serology for syphilis received from the public health laboratory located in Augusta. When a diagnosis of early syphilis has been secured from the physician, permission to interview the infected patient is next obtained from the physician.

The process involves, first a confidential interview with the infected person in which he is informed of the possibility that he may have passed on his infection to other persons who, unless alerted to the possibility of being infected, may go undiagnosed and untreated for an indefinite period.

Patients who have already developed syphilis, although beyond prevention themselves, can serve as index cases through which further spread of the disease can be prevented. Each patient with syphilis is an individual with unique values, attitudes, and problems. The epidemiologic process for each new patient, therefore, must be tailored to meet individual needs and circumstances.

Persons who are potentially incubating the disease can be identified through the various processes of syphilis epidemiology and can be cured if treated with adequate levels of penicillin. This cure serves two purposes. First, it prevents the onset of infectious signs thus aborting real, as well as threatened spread cases. Second, it prevents the person incubating the disease from developing late, debilitating manifestations.

Here in Maine, over the past three years, fifty-eight cases of primary, secondary and early latent (under one year duration) syphilis have had the techniques of epidemiology applied to them. Success with this activity is indicated by the following results:

Patients reported by private physicians	58
Patients interviewed	55
Number of contacts obtained per case interviewed	2.95
Percent of contacts located and examined	74%
Percent of negative contacts receiving preventive treatment	28%
Number of contacts brought to treatment for syphilis	14
Percent of source of infection identified outside-of-state	59%

The tracing of sex contacts of persons diagnosed as having infectious syphilis or gonorrhea is carried out by state and local health departments in the United States and by their counterparts in many other countries throughout the world, regardless of where the "contact" is located. This procedure provides a preventive service against the spread of infection on both a national and international basis. The importance of this procedure is indicated by the large number of contacts that are sent out of the state of Maine for epidemiologic follow-up and evaluation. Contacts sent out from this state have gone to all corners of the fifty states. Several have been sent to Europe and the Far East for follow-up activity.

Over a two-year period, the Bureau of Health's venereal disease control section has received contact referrals from twenty-six states. These contacts received priority attention and are processed immediately by public health specialists.

Continued on Page 240

*Public Health Advisor, Communicable Disease Division.

New England Postgraduate Assembly

November 4, 5, 6, 1969

Statler Hilton Hotel, Boston, Massachusetts

Tuesday Morning, November 4, 1969

Georgian Room

Presiding: SEEBERT J. GOLDOWSKY, M.D., Providence, R. I.

President, Council of the New England State Medical Societies

8:00 **Inhalation Therapy at a Community Hospital**
J. DUNBAR SHIELDS, JR., M.D., Concord, N. H.

9:00 **Post-Operative Fevers—Tufts Medical School**
Moderator: LOUIS WEINSTEIN, M.D., Professor of Medicine, Tufts University School of Medicine
Panelists: ALLAN D. CALLOW, M.D., Professor of Surgery, Tufts University School of Medicine
WILLIAM H. CROSBY, M.D., Professor of Medicine, Tufts University School of Medicine
ROBERT T. MCCOMBS, M.D., Professor of Medicine, Tufts University School of Medicine
RICHARD H. MEADE, III, M.D., Associate Professor of Medicine, Tufts University School of Medicine

Tuesday Afternoon, November 4, 1969

Georgian Room

Presiding: STEVENS J. MARTIN, M.D., Hartford, Conn.

2:00 **Management of Diarrhea—Brown University Medical School and Providence Veterans Administration Hospital**
Moderator: WALTER THAYER, M.D., Director, Division of Gastroenterology, Brown University
Pancreatogenous Diarrhea
Speaker: PHILIP TORGAN, M.D., Instructor of Clinical Medicine, Brown University
Small Intestinal Causes of Diarrhea
Speaker: ALDEN BLACKMAN, M.D.
Diarrhea in the Returning Servicemen From Southeast Asia
Speaker: SIDNEY FINK, M.D., Assistant Professor of Clinical Medicine, Boston University Medical School and Chief of Medicine, Providence Veterans Administration Hospital

Wednesday Morning, November 5, 1969

Georgian Room

Presiding: CHARLES F. BRANCH, M.D., Auburn, Maine

8:00 **Gastroscopy Films**
ROBERT H. SCHAPIRO, M.D., Clinical Associate in Medicine, Harvard Medical School

9:00 **Drug Addiction and Drug Abuse—Yale University School of Medicine**
Moderator: HERBERT D. KLEBER, M.D., Assistant Professor of Psychiatry, Yale University School of Medicine; Director, Dependents Unit, Connecticut Mental Health Center
Hepatitis and Other Medical Disorders in the Addict
Speaker: ROBERT L. SCHEIG, M.D., Associate Professor of Medicine, Yale Medical School
Additional Speaker to be announced

Wednesday Afternoon, November 5, 1969

Georgian Room

Presiding: DEWEES H. BROWN, M.D., Bristol, Vermont

2:00 **Differential Diagnosis of Anemia—Dartmouth Medical School**
Moderator: DEAN J. SEIBERT, M.D., Assistant Clinical Professor of Medicine and Consultant in Hematology, Dartmouth Medical School Affiliated Hospitals
Panelists: THOMAS P. ALMY, M.D., Professor and Chairman, Dept. of Medicine, Dartmouth Medical School
O. ROSS MCINTYRE, M.D., Chief of the Hematology Research Laboratory and Assistant Professor of Medicine, Dept. of Medicine, Dartmouth Medical School

Hancock Room

4:00 **Annual Business Meeting, Council of the New England State Medical Societies**

Georgian Room

8:00 **Open Annual Meeting of the Council of the New England State Medical Societies**
Presiding: SEEBERT J. GOLDOWSKY, M.D., President

Subject: **"Peer Review"**

Speaker: RICHARD S. WILBUR, M.D., Assistant Executive Vice President, American Medical Association

All members of the Council, and those attending the Assembly, and their wives, are most cordially invited to this open meeting. There will be discussion following Dr. Wilbur's formal presentation.

Thursday Morning, November 6, 1969

Georgian Room

Presiding: JACOB H. FINE, M.D., Beverly, Mass.

8:00 **Home Care—A Community Program**

JEANNETTE VIDAL, M.D., Medical Director of Home Care, Kent County Memorial Hospital, Warwick, Rhode Island

8:30 **Coronary Care and Remote Monitoring in the Community**

HAROLD L. OSHER, M.D., Portland, Maine

9:00 **Behavior Problems in the Young—University of Vermont, College of Medicine**

Moderator: R. JAMES MCKAY, M.D., Professor and Chairman, Department of Pediatrics, University of Vermont College of Medicine

Panelists: CHARLES M. POSER, M.D., Professor and Chairman, Department of Neurology, University of Vermont College of Medicine

HANS R. HUESSY, M.D., Professor and Acting Chairman, Department of Psychiatry, University of Vermont College of Medicine

J. WARD STACKPOLE, M.D., Assistant Professor of Clinical Pediatrics, University of Vermont College of Medicine

Thursday Afternoon, November 6, 1969

Georgian Room

Presiding: STEPHEN E. GOLDFINGER, M.D., Newtonville, Mass.; Chairman, Program Committee

2:00 **Drug Therapy in Cardiovascular Diseases—Boston University**

Moderator: WILLIAM HOLLANDER, M.D., Professor of Medicine, Boston University Medical Center

Panelists: ARAM V. CHOBANIAN, M.D., Associate Professor of Medicine, Boston University Medical Center

JACOB LEMANN, JR., M.D., Associate Professor of Medicine, Boston University Medical Center

ANDREW HUVOS, M.D., Assistant Professor of Medicine, Boston University Medical Center

REGISTRATION FEE: $25.00

The program is acceptable for 21 prescribed hours by the A.A.G.P.

IMPORTANT

Dates for your 1970 Calendar

Annual Session —

Maine Medical Association

June 7, 8 and 9, 1970

The Colony

Kennebunkport, Maine

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Continued from Page 236

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Carl A. Brinkman, M.D., 50A Flaggy Meadow Rd., Gorham
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*Appointed by the Council of the M.M.A.

(*To be continued*)

DEPARTMENT OF HEALTH AND WELFARE

Continued from Page 237

When the tools of syphilis epidemiology are consistently applied to cases with case prevention as the immediate objective and priority consideration, the practical eradication of infectious syphilis will continue in Maine. The primary objective of the Bureau of Health's venereal disease control unit will be to maintain a vigilant watch over the possible outbreak of syphilis among the people of this state.

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Each capsule contains 8 mg. of Teldrin® (brand of chlorpheniramine maleate); 50 mg. of phenylpropanolamine hydrochloride; 2.5 mg. of isopropamide, as the iodide.

Prompt relief from nasal congestion and hypersecretion due to colds.

Before prescribing, see complete prescribing information in SK&F literature or *PDR*.
Contraindications: Glaucoma, prostatic hypertrophy, stenosing peptic ulcer, pyloroduodenal or bladder neck obstruction.
Precautions: Use cautiously in the presence of hypertension, hyperthyroidism, coronary artery disease; warn vehicle or machine operators of possible drowsiness.
Usage In Pregnancy: Use in pregnancy, nursing mothers and women who might bear children only when potential benefits have been weighed against possible hazards.
Note: The iodine in isopropamide iodide may alter PBI test results and will suppress I^{131} uptake; discontinue 'Ornade' one week before these tests.
Adverse Reactions: Drowsiness; excessive dryness of nose, throat or mouth; nervousness; insomnia. Other known possible adverse reactions of the individual ingredients: nausea, vomiting, diarrhea, rash, dizziness, fatigue, tightness of chest, abdominal pain, irritability, tachycardia, headache, incoordination, tremor, difficulty in urination. Thrombocytopenia, leukopenia and convulsions have been reported.
Supplied: Bottles of 50 capsules.

One capsule q12h for round-the-clock relief

SK&F Smith Kline & French Laboratories

Pertofrane® desipramine hydrochloride

Indication. Mental depression.

Contraindications. Do not use MAO inhibitors concomitantly or within 2 weeks of the use of this drug. Hyperpyretic crises or severe convulsive seizures may occur with such combinations; potentiation of adverse reactions can be serious or even fatal.

When substituting Pertofrane in patients receiving an MAO inhibitor, allow an interval of at least 14 days. Initial dosage in such patients should be low and increases should be gradual and cautiously prescribed.

The drug is contraindicated following recent myocardial infarction and in patients with a known hypersensitivity to tricyclic antidepressants.

Warning. Activation of psychosis may occasionally be observed in schizophrenic patients. Due to atropine-like effects and sympathomimetic potentiation, use only with the greatest care in patients with narrow-angle glaucoma or urethral or ureteral spasm.

Do not use in patients with the following conditions unless the need outweighs the risk: severe coronary heart disease with EKG abnormalities, progressive heart failure, angina pectoris, paroxysmal tachycardia and active seizure disorder (may lower seizure threshold).

Desipramine and the parent compound, imipramine, have been shown to block the action of guanethidine and related adrenergic neuron-blocking agents.

Hypertensive episodes have been observed during surgery.

The concurrent use of other central nervous system drugs or alcohol may potentiate adverse effects. Since many such drugs may be used during surgery, desipramine should be discontinued prior to elective procedures.

Caution patients on the possibility of impaired ability to operate a motor vehicle or dangerous machinery.

Do not use in women who are or may become pregnant unless the clinical situation warrants the potential risk, and do not use in patients under 12 years of age.

Because of increased sensitivity to the drug, use lower than normal dosage in adolescent and geriatric patients.

Precautions. Potentially suicidal patients require careful supervision and protective measures during therapy. Discontinuation of the drug may be necessary in the presence of increased agitation and anxiety shifting to hypomanic or manic excitement.

Atropine-like effects may be more pronounced (e.g. paralytic ileus) in susceptible patients and in those receiving anticholinergic drugs (including antiparkinsonism agents).

Prescribe cautiously in hyperthyroid patients and in those receiving thyroid medications; transient cardiac arrhythmias have occurred in rare instances.

Periodic blood and liver studies should supplement careful clinical observations in all patients undergoing extended courses of therapy.

Adverse Reactions. The following have been reported. *Nervous System*: dizziness, drowsiness, insomnia, headache, disturbed visual accommodation, tremor, unsteadiness, tinnitus, paresthesias, changes in EEG patterns, epileptiform seizures, mild extrapyramidal activity, falling and neuromuscular incoordination. A confusional state (with such symptoms as hallucinations and disorientation), particularly in older patients and at higher dosage, may require discontinuation of the drug. *Gastrointestinal Tract*: anorexia, dryness of the mouth, nausea, epigastric distress, constipation and diarrhea. *Skin*: skin rashes (including photosensitization), perspiration and flushing sensations. *Liver*: rare cases of transient jaundice (apparently of an obstructive nature) and liver damage. If jaundice or abnormalities in liver function tests occur, discontinue the drug and investigate. *Blood Elements*: bone-marrow depression, agranulocytosis, thrombocytopenia and purpura. If these occur, discontinue the drug. Transient eosinophilia has been observed. *Cardiovascular System*: orthostatic hypotension and tachycardia. Carefully supervise patients requiring concomitant vasodilating therapy, particularly during initial phases. *Genitourinary System*: urinary frequency or retention and impotence. *Endocrine System*: occasional hormonal effects, including gynecomastia, galactorrhea and breast enlargement, and decreased libido and estrogenic effect. *Sensitivity*: urticaria and rare instances of drug fever and cross-sensitivity with imipramine.

Dosage. All patients except geriatric and adolescent: 50 mg. t.i.d. (150 mg. daily). Dosage may be increased up to 200 mg. daily. Geriatric and adolescent patients should usually be started with lower dosage (25 to 50 mg. daily) and may not tolerate higher doses. Dosage may be increased up to 100 mg. daily.

Lower maintenance dosages should be continued for at least 2 months after obtaining a satisfactory response.

Mild anxiety and agitation which may accompany depression usually remit as the depression responds. Occasionally, however, a sedative or tranquilizer may be indicated.

Availability. Maroon and pink capsules of 50 mg. in bottles of 100; pink capsules of 25 mg. in bottles of 100 and 1000. (B)46-530-G

For complete details, please see the full prescribing information.

Geigy Pharmaceuticals
Division of Geigy Chemical Corporation
Ardsley, New York 10502

Coming out of a depression.

And it can often begin to happen in 3 to 5 days with an antidepressant like Pertofrane. There's a lifting of depressed mood... a restoration of psychomotor activity. Patients usually begin to cope, work, maybe play, even enjoy.

It's not all beautiful. Sometimes there are side effects. And not everybody can take the drug. It may even be a slow process. But along with the care and comfort you give depressed patients, consider Pertofrane. Then consider the respons

Please read the prescribing information for full details on contraindications, warnings, precautions, adverse reactions and dosage. It's summarized on the left.

Pertofrane®

desipramine hydrochloride

New 50-mg. capsules now available.

It's beautiful!



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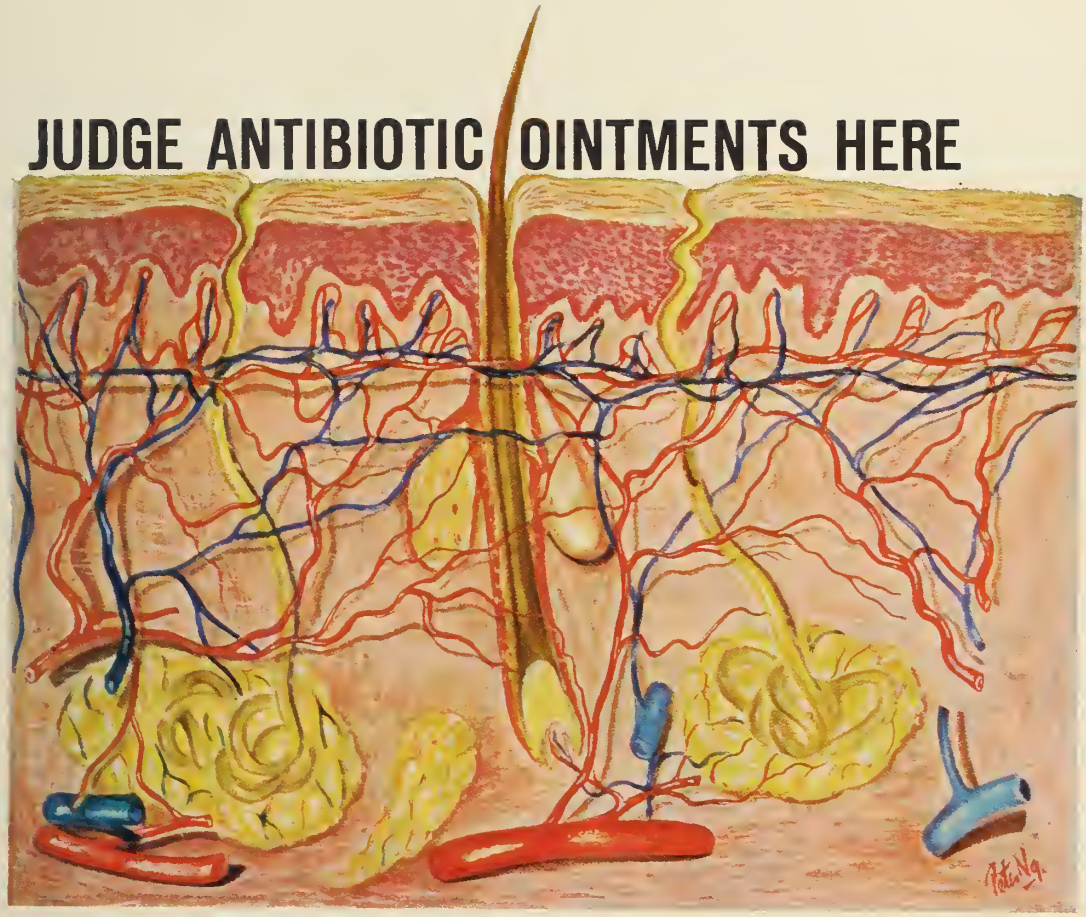
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Results on skin are final proof of any topical antibiotic's effectiveness

No in vitro test can duplicate a clinical situation on living skin. 'Neosporin' (polymyxin B—bacitracin—neomycin) Ointment has consistently proven its effectiveness in thousands of cases of bacterial skin infection. The spectra of the three antibiotics overlap in such a way as to provide bactericidal action against most pathogenic bacteria likely to be found topically. Diffusion of the antibiotics from the special petrolatum base is rapid since they are insoluble in the petrolatum, but readily soluble in tissue fluids. The Ointment is bland and nonirritating.

Caution: As with other antibiotic preparations, prolonged use may result in overgrowth of nonsusceptible organisms and/or fungi. Appropriate measures should be taken if this occurs. Articles in the current medical literature indicate an increase in the prevalence of persons allergic to neomycin. The possibility of such a reaction should be borne in mind.

Contraindications: This product is contraindicated in those individuals who have shown hypersensitivity to any of its components.

Supplied: Tubes of 1 oz., ½ oz. with applicator tip, and ⅛ oz. with ophthalmic tip.

Complete literature available on request from Professional Services Dept. PML.

'NEOSPORIN'®

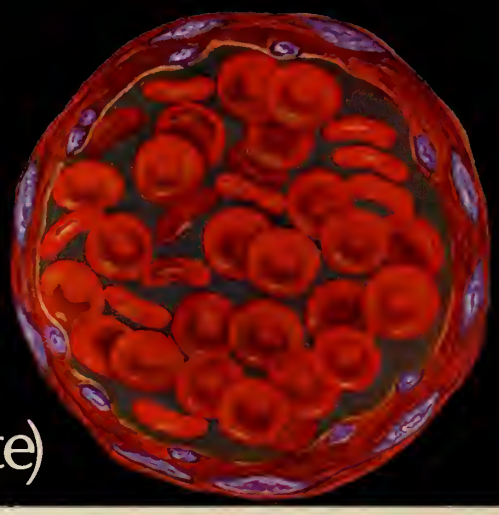
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POLYMYXIN B-BACITRACIN-NEOMYCIN OINTMENT

BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, N.Y.

Roniacol® Timespan®

(nicotinyl alcohol tartrate)



Because peripheral vasodilation is needed now... and must often be continued

Roniacol Timespan (nicotinyl alcohol tartrate) can make a significant contribution to effective treatment of peripheral vascular disorders. It is directed specifically toward improvement of peripheral blood flow, relief of ischemic symptoms, and the long-term management of these conditions.

Specific pharmacologic action—Roniacol (nicotinyl alcohol) acts selectively by relaxing smooth muscle of peripheral blood vessels. Onset of action is smooth and gradual, rarely causing severe flushing.

Relative freedom from side effects—Side effects that may occur occasionally with Roniacol seldom require discontinuation of therapy.

Prolonged, continuous drug release—Prolonged peripheral vasodilation is provided by sustained-release Roniacol Timespan (nicotinyl alcohol tartrate) Tablets. Part of the drug becomes available immediately, the remainder continuously over a period of up to 12 hours, and dilation of constricted peripheral vessels is usually maintained. Thus, with a single dose of medication, patients can enjoy the benefits of increased peripheral blood flow in ischemic extremities for up to 12 hours.



Smooth peripheral vasodilation from initial dosage...extended with simple, well-tolerated, b.i.d. dosage

The prolonged action of Roniacol Timespan (nicotinyl alcohol tartrate) together with its other benefits offer a therapeutically practical measure in the long-term management of peripheral vascular disease–advantages especially important for older patients.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Conditions associated with deficient circulation; e.g., peripheral vascular disease, vascular spasm, varicose ulcers, decubital ulcers, chilblains, Meniere's syndrome and vertigo.

Caution: Roche Laboratories endorses caution in the administration of any therapeutic agent to pregnant patients.

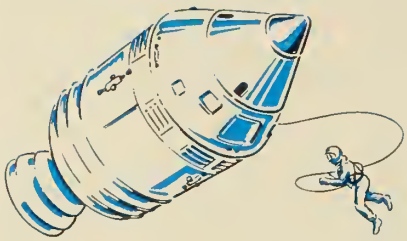
Side Effects: Transient flushing, gastric disturbances, minor skin rashes and allergies may occur in some patients, seldom requiring discontinuation of the drug.

Dosage: 1 or 2 Timespan Tablets—150 mg nicotinyl alcohol in the form of the tartrate salt—bottles of 50 and 500.

ROCHE

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LABORATORIES
Division of Hoffmann - La Roche Inc.
Nutley, New Jersey 07110

Art is a conception of peripheral vasodilation.



Man in space, now fait accompli, re-emphasizes the importance of Uro-Phosphate therapy. Research into the effect of space travel on the astronaut reveals that weightlessness causes loss of bone calcium. As the bones are required to bear less and less of the weight of the body they lose calcium, increasing the calcium content of the urine. When physical activity is reduced, the acidity of the urine should be adjusted to keep increased calcium in solution . . . . a prophylaxis to prevent kidney or bladder calculi.

Uro-Phosphate®

NOW A SUGAR-COATED TABLET

Each tablet contains: METHENAMINE, *300 mg.;* SODIUM ACID PHOSPHATE, *500 mg.*

Uro-Phosphate gives comfort and protection when inactivity causes discomfort in the urinary function. It keeps calcium in solution, preventing calculi; it maintains clear, acid, sterile urine; it encourages complete voiding and lessens frequency when residual urine is present.

Uro-Phosphate contains sodium acid phosphate, a natural urinary acidifier. This component is fortified with methenamine which is inert until it reaches the acid urinary bladder. In this environment it releases a mild antiseptic keeping the urine sterile.

Uro-Phosphate is safe for continuous use. There are no contra-indications other than acidosis. It can be given in sufficient amount to keep the urine clear, acid and sterile. A heavy sugar coating protects its potency.

Dosage:

For protection of the inactive patient 1 or 2 tablets every 4 to 6 hours is usually sufficient to keep the urine clear, acid and sterile.

2 tablets on retiring will keep residual urine acid and sterile, contributing to comfort and rest.

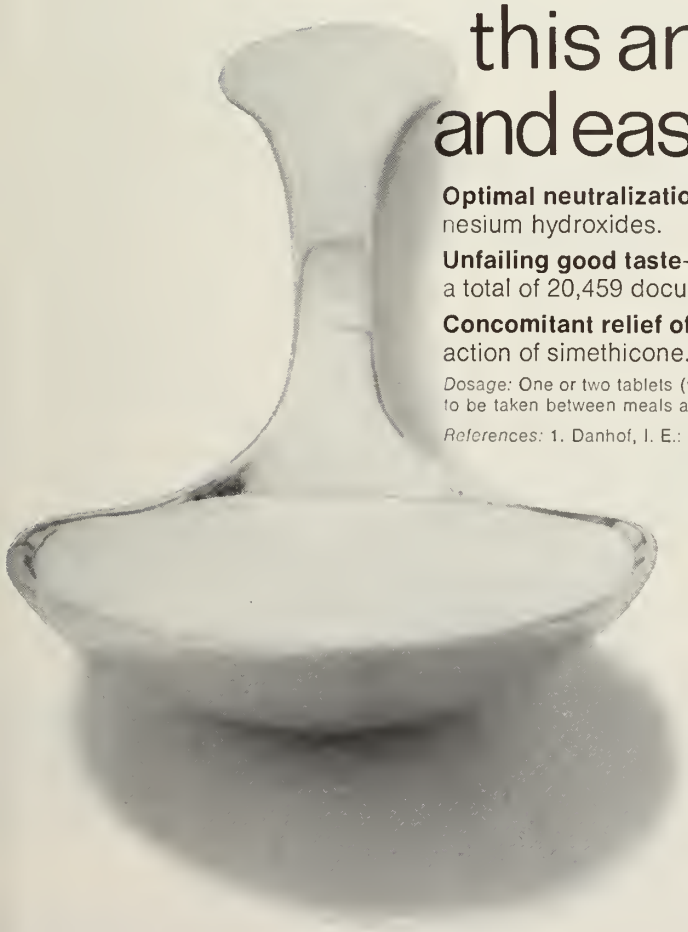
A clinical supply will be sent to physicians and hospitals on request.

WILLIAM P. POYTHRESS & COMPANY, INC., RICHMOND, VIRGINIA 23217

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the thousandth teaspoonful

Peptic ulcer patients find the thousandth dose of this antacid as effective and easy-to-take as the first!



Optimal neutralization—provided by the combination of aluminum and magnesium hydroxides.

Unfailing good taste—confirmed by 87.5% of 104 patients in one study, after a total of 20,459 documented days on Mylanta Liquid or tablets.[1]

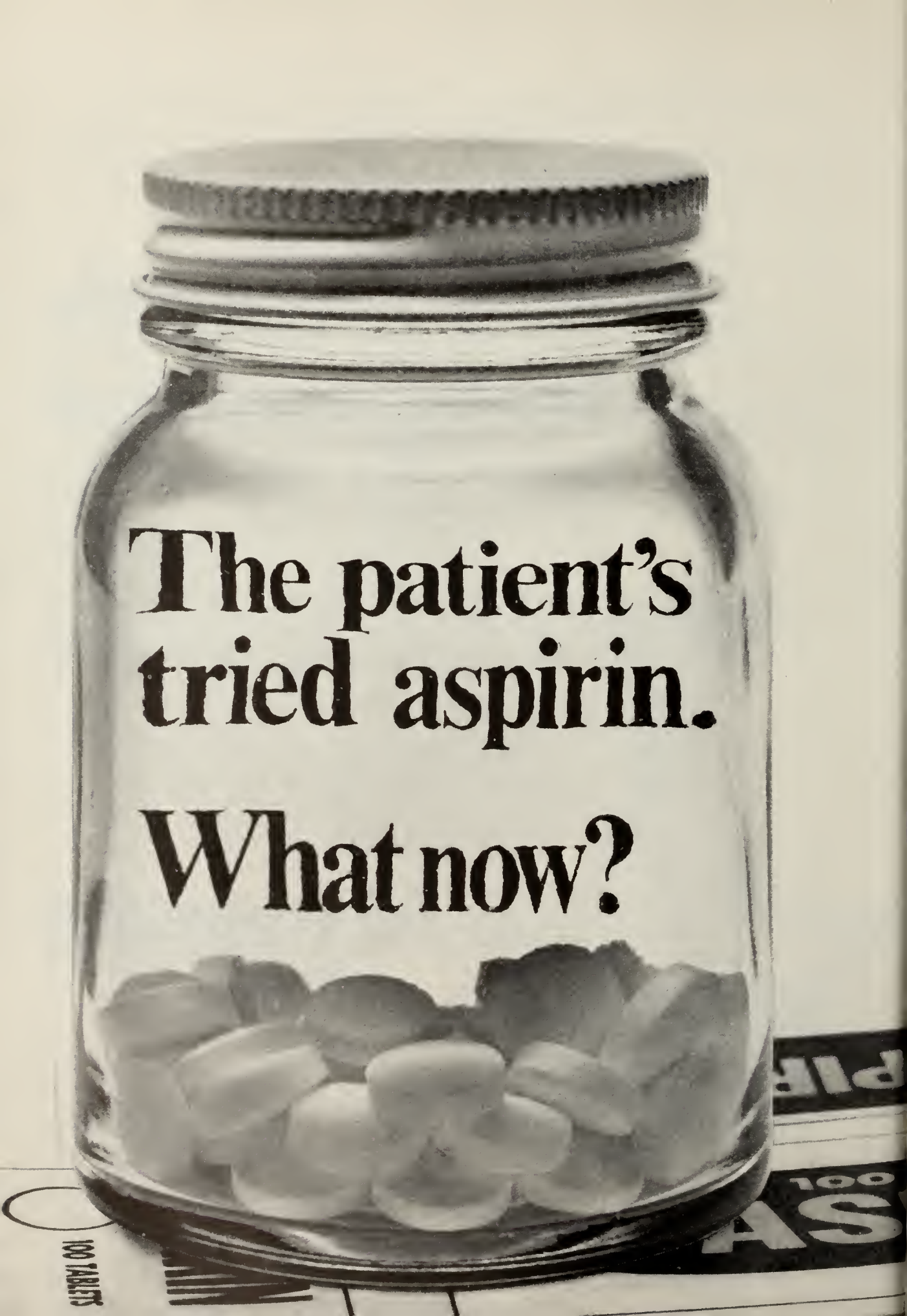
Concomitant relief of G. I. gas distress—provided by the proven antiflatulent action of simethicone.[2]

Dosage: One or two tablets (well chewed or allowed to dissolve in the mouth); one or two teaspoonfuls to be taken between meals and at bedtime, or as directed by physician.

References: 1. Danhof, I. E.: Report on file. 2. Hoon, J. R.: Arch. Surg. 93:467 (Sept.) 1966.

Mylanta®
LIQUID/TABLETS
aluminum and magnesium hydroxides *plus* simethicone

Stuart Division/ATLAS CHEMICAL INDUSTRIES, INC./Pasadena, Calif. 91109


The patient's
tried aspirin.
What now?
100 TABLETS

There's a good chance your patient needs more than a non-prescription analgesic for pain relief. Especially after self-medication has failed.

Because continuing, increased pain and discomfort may in part be a reflection of anxiety, Equagesic is worthy of consideration. In a single, non-narcotic preparation, it helps relieve pain . . . *and* associated anxiety and tension.

Tablets

Equagesic®

(meprobamate and ethoheptazine citrate with aspirin) Wyeth

IN BRIEF

Contraindications: History of sensitivity or severe intolerance to aspirin, meprobamate or ethoheptazine citrate.

Warnings: USE IN PREGNANCY: Safety for use during pregnancy or lactation has not been established; therefore, it should be used in pregnant patients or women of child-bearing age only when the physician judges its use essential to the patient's welfare.

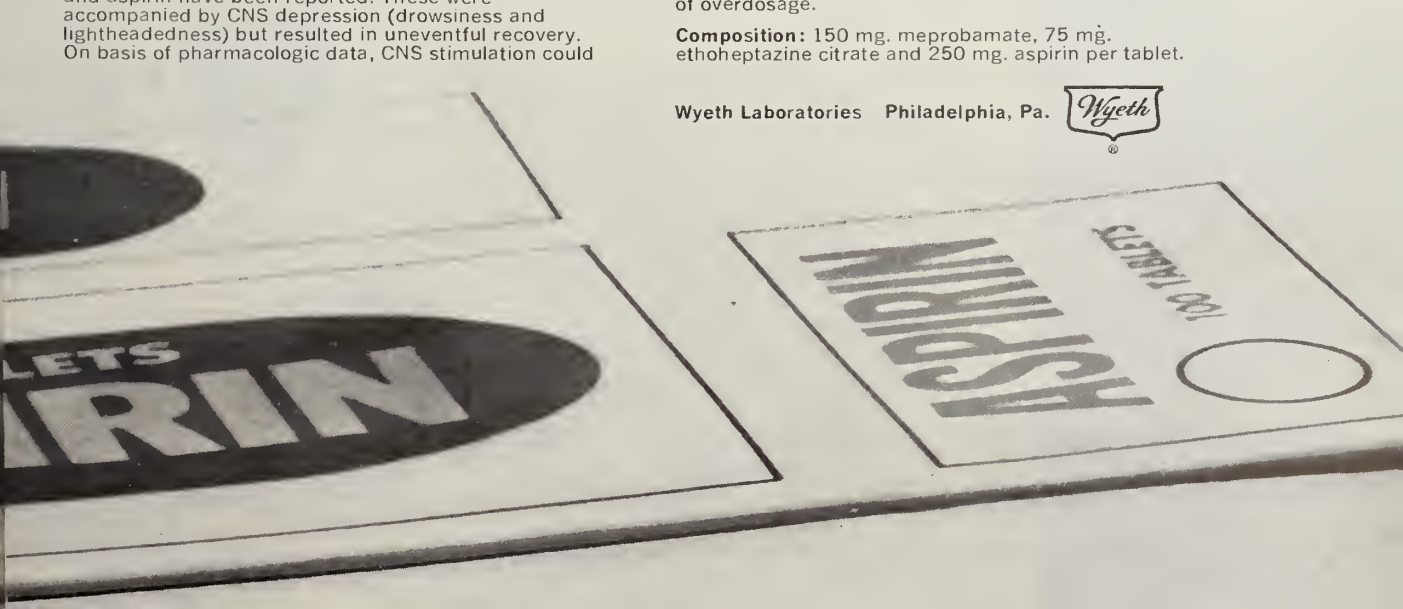
Precautions: Keep out of reach of children. Not recommended for patients 12 years old or less. Carefully supervise dose and amounts prescribed, especially for patients prone to overdose themselves. Excessive prolonged use of meprobamate in susceptible persons—as alcoholics, ex-addicts, severe psychoneurotics—has resulted in dependence or habituation. Withdraw gradually after prolonged excessive dosage to avoid possibly severe withdrawal reactions including epileptiform seizures. Warn patients of possible reduced alcohol tolerance, with resultant slowed reactions and impaired judgment and coordination. If drowsiness, ataxia or visual disturbances (impairment of accommodation and visual acuity) occur, reduce dose. If symptoms persist, patients should not operate machinery or drive. After meprobamate overdose, prompt sleep, reduction of blood pressure, pulse and respiratory rates to basal levels, and hyperventilation are reported. Give cautiously and in small amounts to patients with suicidal tendencies. Treat attempted suicide (has resulted in coma, shock, vasomotor and respiratory collapse and anuria) with gastric lavage and appropriate symptomatic therapy (CNS stimulants and pressor amines as indicated). Two instances of accidental or intentional significant overdosage with ethoheptazine and aspirin have been reported. These were accompanied by CNS depression (drowsiness and lightheadedness) but resulted in uneventful recovery. On basis of pharmacologic data, CNS stimulation could be anticipated, with nausea, vomiting and salicylate intoxication (requires induced vomiting or gastric lavage, specific parenteral electrolyte therapy for ketoacidosis and dehydration, and observation for hypoprothrombinemic hemorrhage [usually requires whole blood transfusions]).

Adverse Reactions: Ethoheptazine and aspirin may cause nausea with or without vomiting and epigastric distress in a small percentage of patients. Dizziness is rare at recommended dosage. Meprobamate may cause drowsiness, ataxia and rarely allergic or idiosyncratic reactions. These reactions, sometimes severe, can develop in patients receiving only 1 to 4 doses. Such patients may have had no previous contact with meprobamate and may or may not have an allergic history. Mild reactions are characterized by urticarial or erythematous maculopapular rash. Acute nonthrombocytopenic purpura with cutaneous petechiae, ecchymoses, peripheral edema and fever have been reported. If allergic reaction occurs, discontinue meprobamate; do not reinstitute. Severe reactions, observed very rarely, include fever, fainting spells, angioneurotic edema, bronchial spasms, hypotensive crises (1 fatal case), anaphylaxis, stomatitis and proctitis (1 case) and hyperthermia. These cases should be treated symptomatically including, when indicated, such medication as epinephrine, antihistamine and possibly hydrocortisone. A few cases of leukopenia, usually transient, have been reported on continuous use. Rarely, aplastic anemia (1 fatal case), thrombocytopenic purpura, agranulocytosis, and hemolytic anemia have been reported, almost always in presence of known toxic agents.

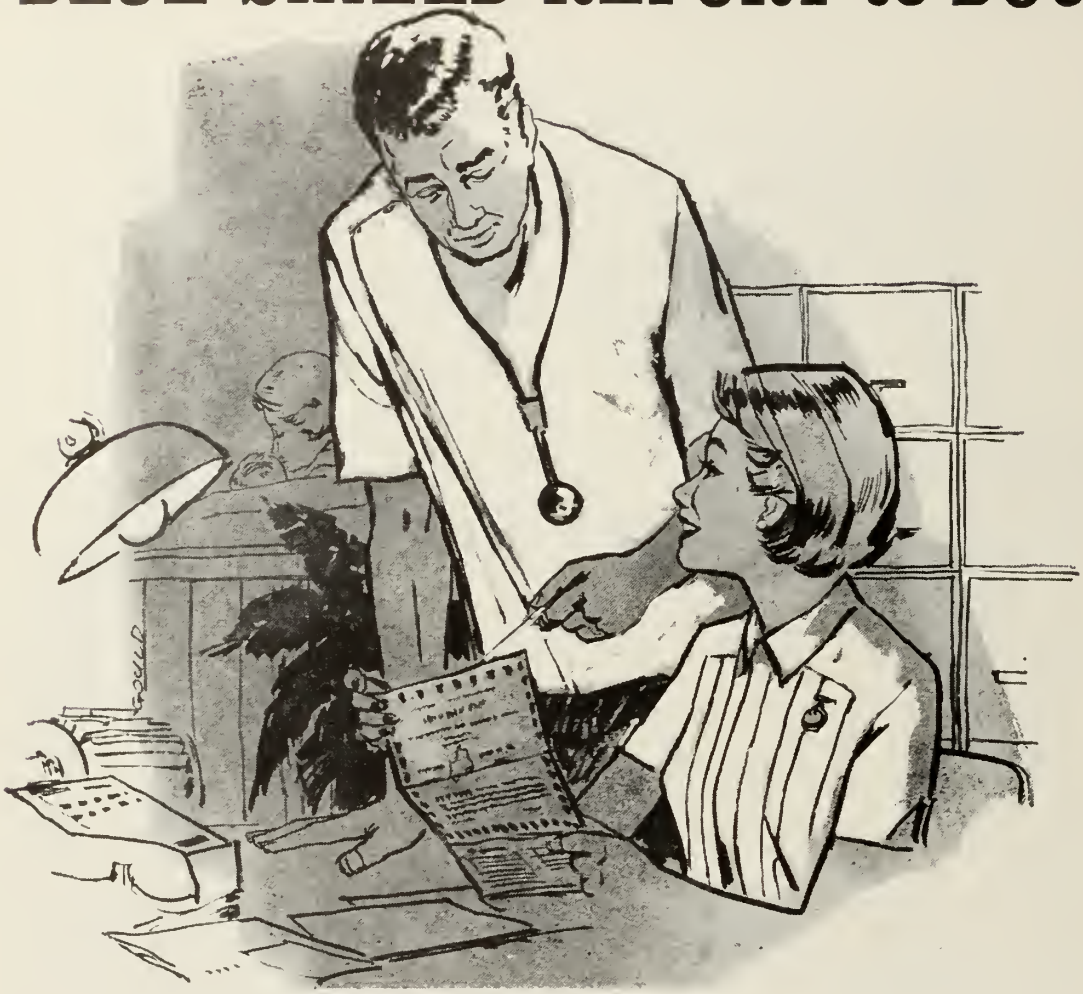
Overdosage: See precautions section for management of overdosage.

Composition: 150 mg. meprobamate, 75 mg. ethoheptazine citrate and 250 mg. aspirin per tablet.

Wyeth Laboratories Philadelphia, Pa. Wyeth®



A BLUE SHIELD REPORT to DOCTORS



REPORT # 28

Insure Prompt Claim Processing

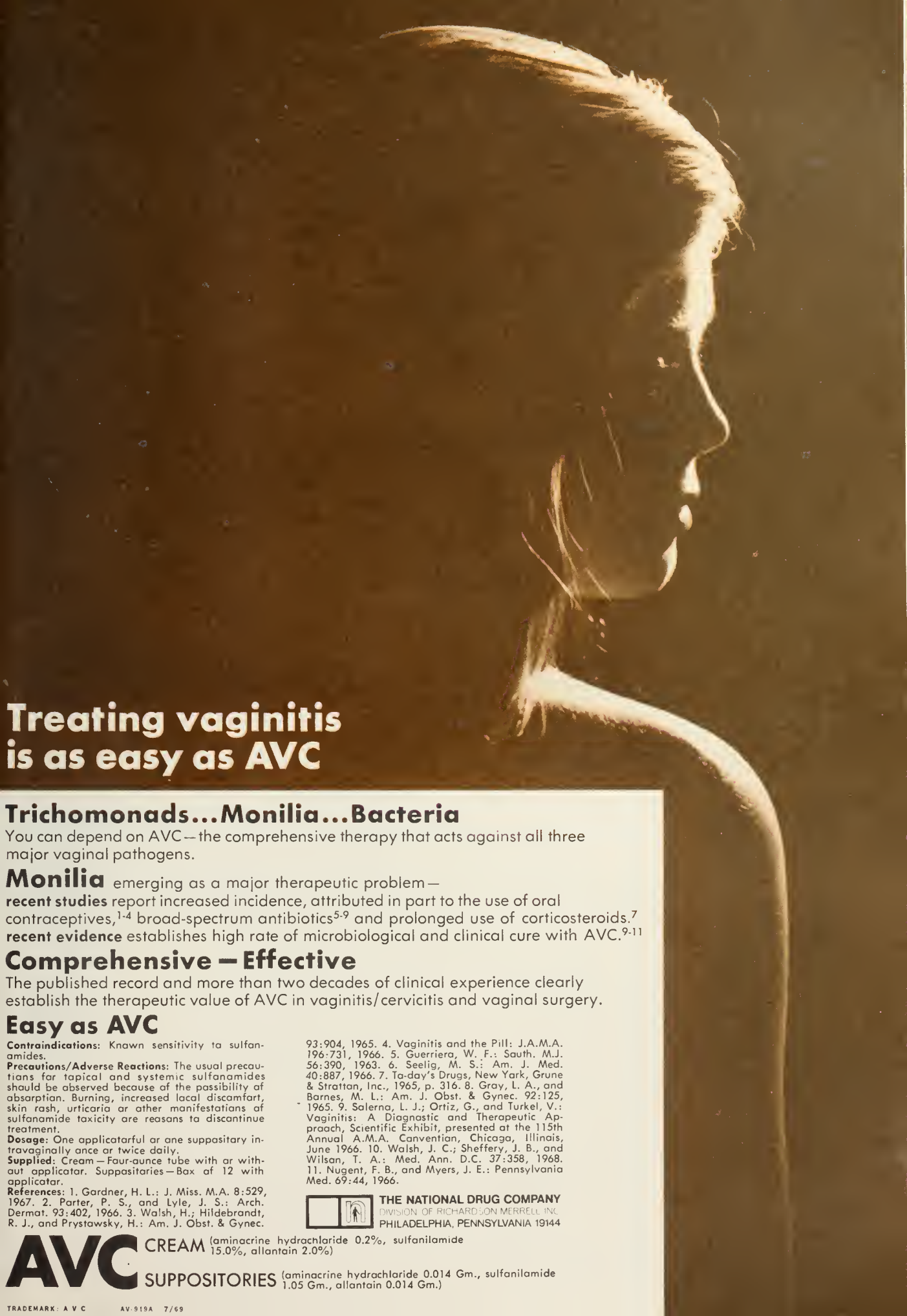
In order to insure the prompt processing of claims, please take an extra minute to be sure the following information is shown:

1. Contract & group numbers
2. Dates of services
3. Physician's charge *not* the scheduled fee
4. Physician's signature
5. Subscriber's or spouse's signature

Recommend

With Over 800
Participating MDs

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509 and 517 FOREST AVENUE
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Treating vaginitis is as easy as AVC

Trichomonads...Monilia...Bacteria

You can depend on AVC—the comprehensive therapy that acts against all three major vaginal pathogens.

Monilia emerging as a major therapeutic problem—
recent studies report increased incidence, attributed in part to the use of oral contraceptives,[1-4] broad-spectrum antibiotics[5-9] and prolonged use of corticosteroids.[7]
recent evidence establishes high rate of microbiological and clinical cure with AVC.[9-11]

Comprehensive—Effective

The published record and more than two decades of clinical experience clearly establish the therapeutic value of AVC in vaginitis/cervicitis and vaginal surgery.

Easy as AVC

Contraindications: Known sensitivity to sulfanamides.
Precautions/Adverse Reactions: The usual precautions for topical and systemic sulfanamides should be observed because of the possibility of absorption. Burning, increased local discomfort, skin rash, urticaria or other manifestations of sulfanamide toxicity are reasons to discontinue treatment.
Dosage: One applicatorful or one suppositary intravaginally once or twice daily.
Supplied: Cream—Four-ounce tube with or without applicator. Suppositaries—Box of 12 with applicator.
References: 1. Gardner, H. L.: J. Miss. M.A. 8:529, 1967. 2. Porter, P. S., and Lyle, J. S.: Arch. Dermat. 93:402, 1966. 3. Walsh, H.; Hildebrandt, R. J., and Prystawsky, H.: Am. J. Obst. & Gynec. 93:904, 1965. 4. Vaginitis and the Pill: J.A.M.A. 196:731, 1966. 5. Guerriera, W. F.: South. M.J. 56:390, 1963. 6. Seelig, M. S.: Am. J. Med. 40:887, 1966. 7. Today's Drugs, New York, Grune & Strattan, Inc., 1965, p. 316. 8. Gray, L. A., and Barnes, M. L.: Am. J. Obst. & Gynec. 92:125, 1965. 9. Salerno, L. J.; Ortiz, G., and Turkel, V.: Vaginitis: A Diagnostic and Therapeutic Approach, Scientific Exhibit, presented at the 115th Annual A.M.A. Convention, Chicago, Illinois, June 1966. 10. Walsh, J. C.; Sheffery, J. B., and Wilson, T. A.: Med. Ann. D.C. 37:358, 1968. 11. Nugent, F. B., and Myers, J. E.: Pennsylvania Med. 69:44, 1966.

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AVC CREAM (aminacrine hydrachloride 0.2%, sulfanilamide 15.0%, allantain 2.0%)

SUPPOSITORIES (aminacrine hydrachloride 0.014 Gm., sulfanilamide 1.05 Gm., allantain 0.014 Gm.)

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Painful night leg cramps...

unwelcome bedfellow for any patient– including those with arthritis, diabetes or PVD

One thing patients can sleep without, particularly patients with chronic disease conditions such as arthritis, diabetes or PVD, is painful night leg cramps. Although seldom the presenting complaint, night leg cramps can tie your patients up in painful knots. Now, just one tablet of QUINAMM at bedtime can usually bring an end to shattered sleep and needless suffering. Your patients will sleep restfully—gratefully—with QUINAMM, specific therapy to prevent painful night leg cramps.

Prescribing Information—Composition: Each white, beveled, compressed tablet contains: Quinine sulfate, 260 mg., Aminophylline, 195 mg. **Indications:** For the prevention and treatment of nocturnal and recumbency leg muscle cramps, including those associated with arthritis, diabetes, varicose veins, thrombophlebitis, arteriosclerosis and static foot deformities. **Contraindications:** QUINAMM is contraindicated in pregnancy because of its quinine content. **Precautions/Adverse Reactions:** Aminophylline may produce intestinal cramps in some instances, and quinine may produce symptoms of cinchonism, such as tinnitus, dizziness, and gastrointestinal disturbance. Discontinue use if ringing in the ears, deafness, skin rash, or visual disturbances occur. **Dosage:** One tablet upon retiring. Where necessary, dosage may be increased to one tablet following the evening meal and one tablet upon retiring. **Supplied:** Bottles of 100 and 500 tablets.

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PHILADELPHIA, PENNSYLVANIA 19144

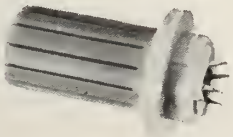
Quinamm™ Specific therapy for night leg cramps
(quinine sulfate 260 mg., aminophylline 195 mg.)

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TB is still around.

In 1967 almost 45,000 new active cases were reported. Isn't that a good reason to make tuberculin testing with the white LEDERTINE™ Applicator a routine part of your physical examinations?



TUBERCULIN TINE TEST
(Rosenthal) with Old Tuberculin

Precautions: With a positive reaction, consider further diagnostic procedures. Use with caution in persons with active tuberculosis or known allergy to acacia. Vesiculation, ulceration, or necrosis may occur at the test site in highly sensitive persons.

Lederle LEDERLE LABORATORIES
A Division of American Cyanamid Company, Pearl River, N.Y.
4729

Taste!

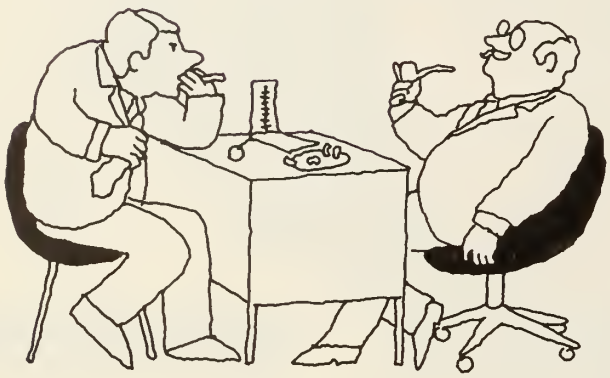
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ANTACID

Your ulcer patients and others will love it. Specify DICARBOSIL 144's—144 tablets in 12 rolls.



ARCH LABORATORIES
319 South Fourth Street, St. Louis, Missouri 63102

The Apprehensive Hypertensive



WELL, YOU HAVE WHAT WE CALL MODERATE HYPERTENSION— HIGH BLOOD PRESSURE. NOW I DON'T WANT YOU TO WORRY, BUT WE ARE GOING TO HAVE TO CHANGE A FEW LIVING HABITS. FIRST, WE'RE GOING TO HAVE TO CUT OUT SMOKING—ALTOGETHER.

THEN WE HAVE TO LOSE WEIGHT. 20 POUNDS SHOULD DO IT... WE'LL TALK A LITTLE LATER ABOUT THIS DIET WE'RE GOING TO START.

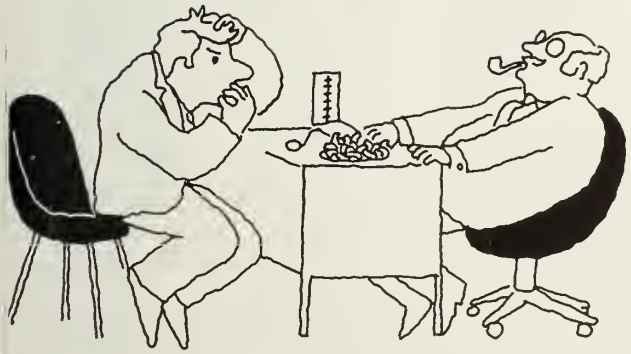


Regroton® to lower blood pressure

chlorthalidone 50 mg.
reserpine U.S.P. 0.25 mg.

Regroton®: chlorthalidone 50 mg., reserpine U.S.P. 0.25 mg.
Indications: Hypertension. *Contraindications:* History of mental depression, hypersensitivity, and most cases of severe renal or hepatic diseases. *Warning:* With the administration of enteric-coated potassium supplements, which should be used only when adequate dietary supplementation is not practical, the possibility of small-bowel lesions (obstruction, hemorrhage, and perforation) should be kept in mind. Surgery for these lesions has frequently been required and deaths have occurred. Discontinue coated potassium-containing formulations immediately if abdominal pain, distention, nausea, vomiting, or gastrointestinal bleeding occur. Discontinue one week before electroshock therapy, and if depression or peptic ulcer occurs. *Use in pregnancy:* Because chlorthalidone may cross the placental barrier and appear in cord blood and thiazides may appear in breast milk, this drug should be used with care in pregnant patients and nursing mothers. When used in women of childbearing age, the potential benefits of the drug should be weighed against the possible hazards to the fetus. Use of chlorthalidone may result in fetal or neonatal jaundice, thrombocytopenia, and possibly other adverse reactions which have occurred in the adult. Increas respiratory secretions, nasal congestion, cyanosis and anorexia m occur in infants born to reserpine-treated mothers. *Precautions:* Antih pertensive therapy with this drug should always be initiated cautious in postsympathectomy patients and in patients receiving ganglion blocking agents, other potent antihypertensive drugs, or curare. Redu dosage of concomitant antihypertensive agents by at least one-half. avoid hypotension during surgery, discontinue therapy with this age two weeks prior to elective surgical procedures. In emergency surge use, if needed, anticholinergic or adrenergic drugs or other supporti measures as indicated. Because of the possibility of progression renal damage, periodic kidney function tests are indicated. Discontin if the BUN rises or liver dysfunction is aggravated. Hepatic coma m be precipitated. Electrolyte imbalance, sodium and/or potassium d pletion may occur. If potassium depletion should occur during therap the drug should be discontinued and potassium supplements give provided the patient does not have marked oliguria. Take particular ca in cirrhosis or severe ischemic heart disease and in patients receivi

WE'VE GOT TO GET PLENTY OF REST AND TRY TO AVOID SITUATIONS THAT MAKE US ANXIOUS OR TENSE. AND WE'LL TAKE MEDICINE TO LOWER OUR BLOOD PRESSURE AND CALM US DOWN.



WE'VE GOT PROBLEMS.



and allay anxiety in hypertension

orticosteroids, ACTH, or digitalis. Severe salt restriction is not recommended. Use cautiously in patients with ulcerative colitis or gallstones biliary colic may be precipitated). Bronchial asthma may occur in usceptible patients. *Adverse Reactions:* The drug is generally well olerated. The most frequent side effects are nausea, gastric irritation, omiting, diarrhea, constipation, muscle cramps, headache, dizziness nd acute gout. Other potential side effects include angina pectoris, nxiety, depression, bradycardia and ectopic cardiac rhythms (especially when used with digitalis), drowsiness, dull sensorium, hyperglyemia and glycosuria, hyperuricemia, lassitude, restlessness, transient hyopia, impotence or dysuria, orthostatic hypotension which may be otentiated when chlorthalidone is combined with alcohol, barbiturates r narcotics, leukopenia, aplastic anemia, skin rashes, thrombocytoenia, agranulocytosis, nasal stuffiness, increased gastric secretions, ightmare, purpura, urticaria, ecchymosis, weakness, uveitis, optic trophy and glaucoma, and pruritus. Eruptions and/or flushing of the kin, a reversible paralysis agitans-like syndrome, blurred vision, conunctival injection, increased susceptibility to colds, dyspnea, weight gain, decreased libido, dryness of the mouth, deafness, anorexia, and pancreatitis when epigastric pain or unexplained G.I. symptoms develop after prolonged administration. Jaundice, xanthopsia, paresthesia, photosensitization and necrotizing angiitis are possible. *Average Dosage:* One tablet daily with breakfast. *Availability:* Pink, single-scored tablets in bottles of 100 and 1000. (B)46-600-C

For details, please see complete prescribing information.

Regroton®
chlorthalidone 50 mg.
reserpine U.S.P. 0.25 mg.

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Ardsley, New York 10502

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The AMBAR® SCRAPBOOK of Obesity Oddities
FACT & LEGEND



CONTROL FOOD AND MOOD ALL DAY LONG WITH A SINGLE MORNING DOSE

AMBAR #2 EXTENTABS®

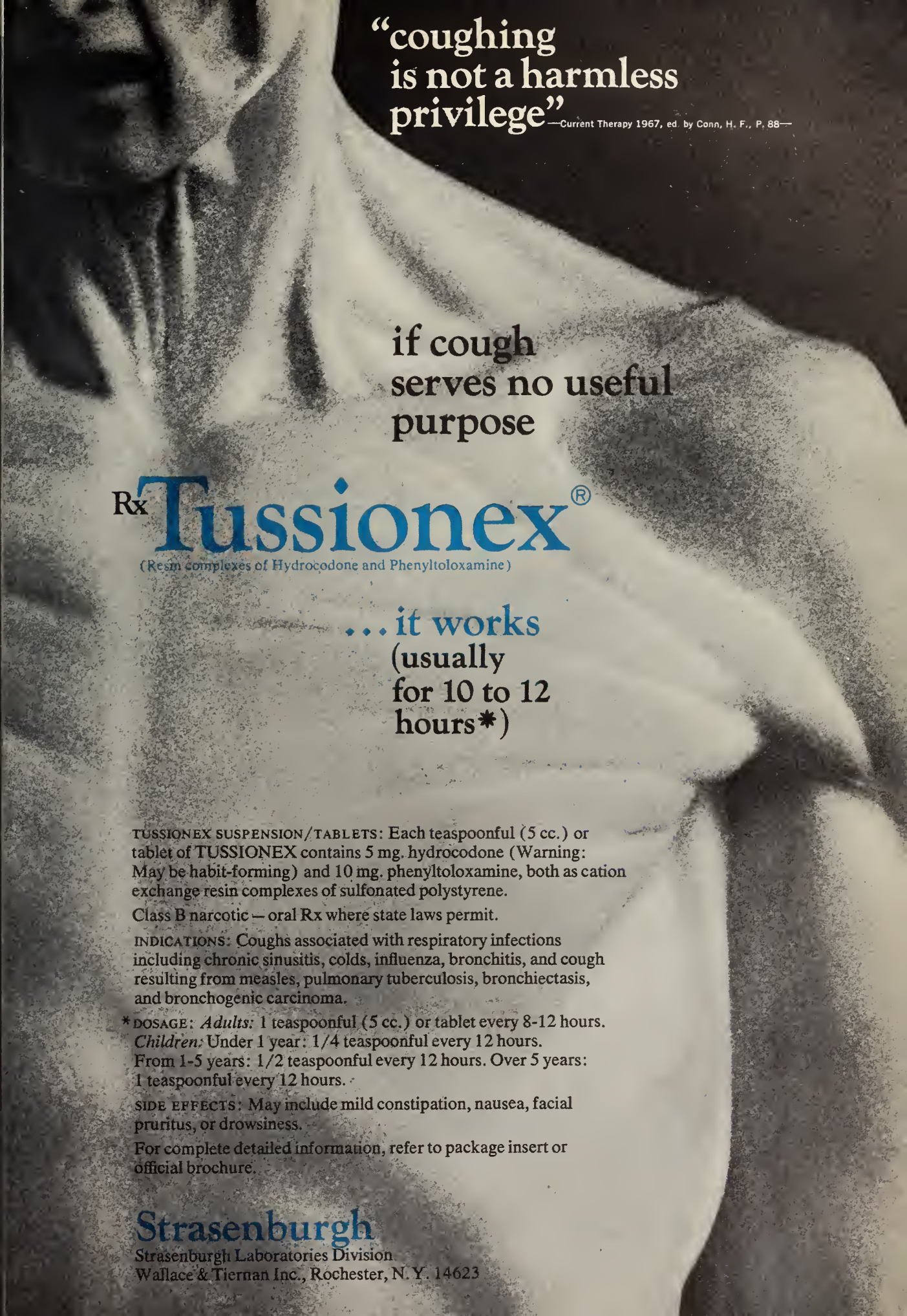
methamphetamine HCl 15 mg., phenobarbital 64.8 mg. (1 gr.) (Warning: may be habit forming).

One Ambar Extentab before breakfast can help control most patients' appetite for up to 12 hours. Methamphetamine, the appetite suppressant, gently elevates mood and helps overcome dieting frustrations. Phenobarbital, the sedative in Ambar, controls irritability and anxiety... helps maintain a state of mental calm and equanimity. Both work together to ease the tensions that erode the willpower during periods of dieting.

Also available: Ambar #1 Extentabs®—methamphetamine hydrochloride 10 mg., phenobarbital 64.8 mg. (1 gr.) (Warning: may be habit forming).

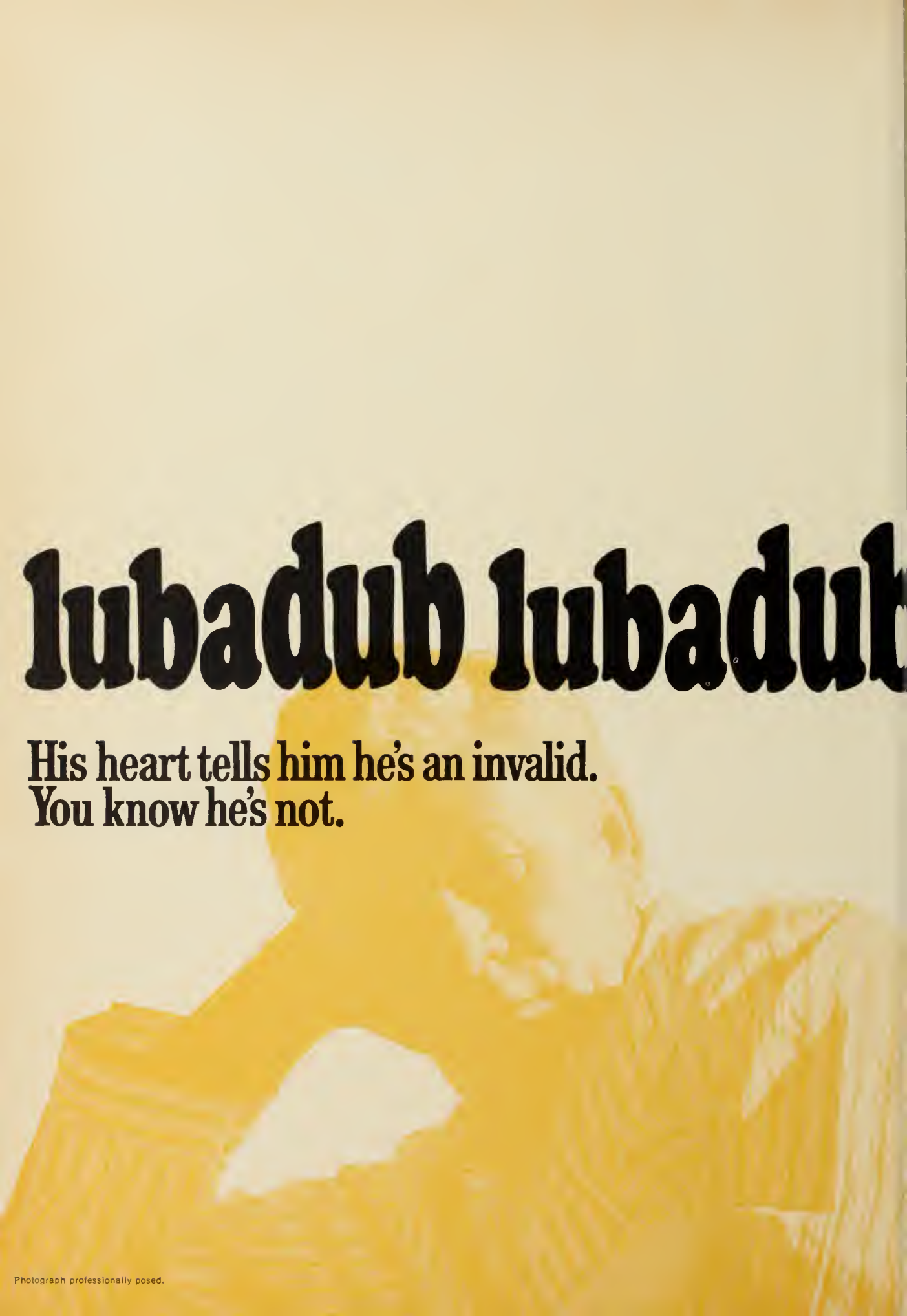
BRIEF SUMMARY/**Indications:** Ambar suppresses appetite and helps offset emotional reactions to dieting. **Contraindications:** Hypersensitivity to barbiturates or sympathomimetics; patients with advanced renal or hepatic disease. **Precautions:** Administer with caution in the presence of cardiovascular disease or hypertension. **Side Effects:** Nervousness or excitement occasionally noted, but usually infrequent at recommended dosages. Slight drowsiness has been reported rarely. See package insert for further details.

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(Resin complexes of Hydrocodone and Phenyltoloxamine)
...it works (usually for 10 to 12 hours*)
TUSSIONEX SUSPENSION/TABLETS: Each teaspoonful (5 cc.) or tablet of TUSSIONEX contains 5 mg. hydrocodone (Warning: May be habit-forming) and 10 mg. phenyltoloxamine, both as cation exchange resin complexes of sulfonated polystyrene.
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*DOSAGE: *Adults:* 1 teaspoonful (5 cc.) or tablet every 8-12 hours. *Children:* Under 1 year: 1/4 teaspoonful every 12 hours. From 1-5 years: 1/2 teaspoonful every 12 hours. Over 5 years: 1 teaspoonful every 12 hours.
SIDE EFFECTS: May include mild constipation, nausea, facial pruritus, or drowsiness.
For complete detailed information, refer to package insert or official brochure.
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lubadub lubadub

His heart tells him he's an invalid.
You know he's not.



Photograph professionally posed.

Contraindications: History of sensitivity to meprobamate.

Important Precautions: Carefully supervise dose and amounts prescribed, especially for patients prone to overdose themselves. Excessive prolonged use has been reported to result in dependence or habituation in susceptible persons, as alcoholics, ex-addicts, and other severe psychoneurotics. After prolonged excessive dosage, reduce dosage gradually to avoid possibly severe withdrawal reactions. Abrupt discontinuance of excessive doses has sometimes resulted in epileptiform seizures.

Warn patients of possible reduced alcohol tolerance, with resultant slowing of reaction time and impairment of judgment and coordination.

Reduce dose if drowsiness, ataxia or visual disturbance occurs; if persistent, patients should not operate vehicles or dangerous machinery.

Side Effects include drowsiness, usually transient; if persistent and associated with ataxia, usually responds to dose reduction; occasionally concomitant CNS stimulants (amphetamine, mephentermine sulfate) are desirable. Allergic or idiosyncratic reactions are rare, but such reactions, sometimes severe, can develop in patients receiving only 1 to 4 doses who have had no previous contact with meprobamate. Previous history of allergy may or may not be related to incidence of reactions. Mild reactions are characterized by itchy urticarial or erythematous maculopapular rash, generalized or confined to groin. Acute nonthrombocytopenic purpura with cutaneous petechiae, ecchymoses, peripheral edema and fever have been reported. One fatal case of bullous dermatitis following intermittent use of meprobamate with prednisolone has been reported. If allergic reaction occurs, meprobamate should be stopped and not reinstituted. Severe reactions, observed very rarely, include angioneurotic edema, bronchial spasms, fever, fainting spells, hypotensive crises (1 fatal case), anaphylaxis, stomatitis and proctitis (1 case) and hyperthermia. Treat symptomatically as with epinephrine, antihistamine and possibly hydrocortisone. Aplastic anemia (1 fatal case), thrombocytopenic purpura, agranulocytosis and hemolytic anemia have occurred rarely, almost always in presence of known toxic agents. A few cases of leukopenia usually transient, have been reported on continuous administration.

Meprobamate may sometimes precipitate grand mal attacks in patients susceptible to both grand and petit mal. Extremely large doses can produce rhythmic fast activity in the cortical pattern. Impairment of accommodation and visual acuity has been reported rarely. After excessive dosage for weeks or months, withdraw gradually (1 or 2 weeks) to avoid recurrence of pretreatment symptoms (insomnia, severe anxiety, anorexia). Abrupt discontinuance of excessive doses has sometimes resulted in vomiting, ataxia, tremors, muscle twitching and epileptiform seizures. Prescribe very cautiously and in small amounts for patients with suicidal tendencies. Suicidal attempts have resulted in coma, shock, vasomotor and respiratory collapse and anuria. Excessive doses have resulted in prompt sleep; reduction of blood pressure, pulse and respiratory rates to basal levels; and occasionally hyperventilation. Treat with immediate gastric lavage and appropriate symptomatic therapy. (CNS stimulants and pressor amines as indicated.) Doses above 2400 mg./day are not recommended.

Composition: Tablets, 200 mg. and 400 mg. meprobamate. Coated Tablets, WYSEALS® EQUANIL (meprobamate) 400 mg. (All tablets also available in REDIPAK® [strip pack], Wyeth.) Continuous-Release Capsules, EQUANIL L-A (meprobamate) 400 mg.

Wyeth Laboratories Philadelphia, Pa.

ibadubdub lubadi

Anxiety is expected in the cardiovascular patient. A little may even be desirable.

But when anxiety is exaggerated . . . when it interferes with sleep . . . when it aggravates cardiovascular symptoms, your help may be needed.

Naturally, you'll want to reassure the patient.

And perhaps prescribe Equanil (meprobamate) as adjunctive therapy. It helps relieve anxiety and tension specifically, yet gently.

Almost 15 years' use has shown that Equanil is usually well tolerated as well as effective. Side effects are generally limited to transient drowsiness; serious, therapy-interrupting side effects are rare.

Equanil®

(meprobamate) Wyeth®



No place for beginners

Terramycin®
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An infection of rapid onset requiring prompt attention. Teenage girl with chills, fever, abdominal pain, backache and nausea. Frequent and urgent urination with burning. On examination—tenderness over kidney. Blood count and urinalysis confirm the diagnosis: acute pyelonephritis. Treatment is initiated with Terramycin. Within a few days of follow-up therapy, the patient is markedly improved. The pretreatment urine culture shows a strain of *E. coli* highly susceptible to Terramycin.

Experience has shown that Terramycin offers special advantages in treating urinary tract infections when strains of causative bacteria are susceptible. Broad-spectrum coverage unaffected by penicillinase. Effective tissue levels to help reach foci of infection in renal parenchyma. High urine levels—excreted by kidney in *active* form.

With Terramycin, you have the assurance that comes with choosing an agent physicians have depended on for over 18 years. In difficult as well as routine cases, when tests reveal susceptible organisms, consider Terramycin. One of the world's most widely used broad-spectrums.

Contraindicated: In individuals hypersensitive to oxytetracycline.

Warnings: Reduce usual oral dosage and consider antibiotic serum level determinations in patients with impaired renal function.

Use of oxytetracycline during the last trimester of pregnancy, neonatal period and early childhood may cause discoloration of developing teeth. This effect occurs mostly during long-term use of the drug, but it has also been observed in usual short-treatment courses.

During treatment with tetracyclines, individuals susceptible to photodynamic reactions should avoid direct sunlight; if such reactions occur, discontinue therapy.

Note: With oxytetracycline, phototoxicity is unknown and photoallergy very rare.

Precautions: Use of broad-spectrum antibiotics occasionally may result in overgrowth of nonsusceptible organisms. Where such infections occur, discontinue oxytetracycline and institute specific therapy. Increased intracranial pressure in infants is a possibility. Symptoms disappear upon discontinuation of therapy.

Adverse Reactions: Nausea, diarrhea, glossitis, stomatitis, proctitis, vaginitis and dermatitis, as well as reactions of an allergic nature, may occur but are rare.

Supply:* Terramycin Capsules: oxytetracycline HCl, 250 mg. and 125 mg. Terramycin Syrup: calcium oxytetracycline, 125 mg. per 5 cc. Terramycin Pediatric Drops: calcium oxytetracycline, 100 mg. per cc.

*All potencies listed are in terms of the standard, oxytetracycline.

More detailed professional information available on request.



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(oxytetracycline)

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When disease is ruled out and psychic tension is implicated

Valium® (diazepam) helps relax the patient and relieve his somatic symptoms

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms have occurred following abrupt discontinuance. Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcitec states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation, have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

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THE JOURNAL
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The Maine Medical Association

VOLUME 60 NOVEMBER, 1969 NUMBER 11

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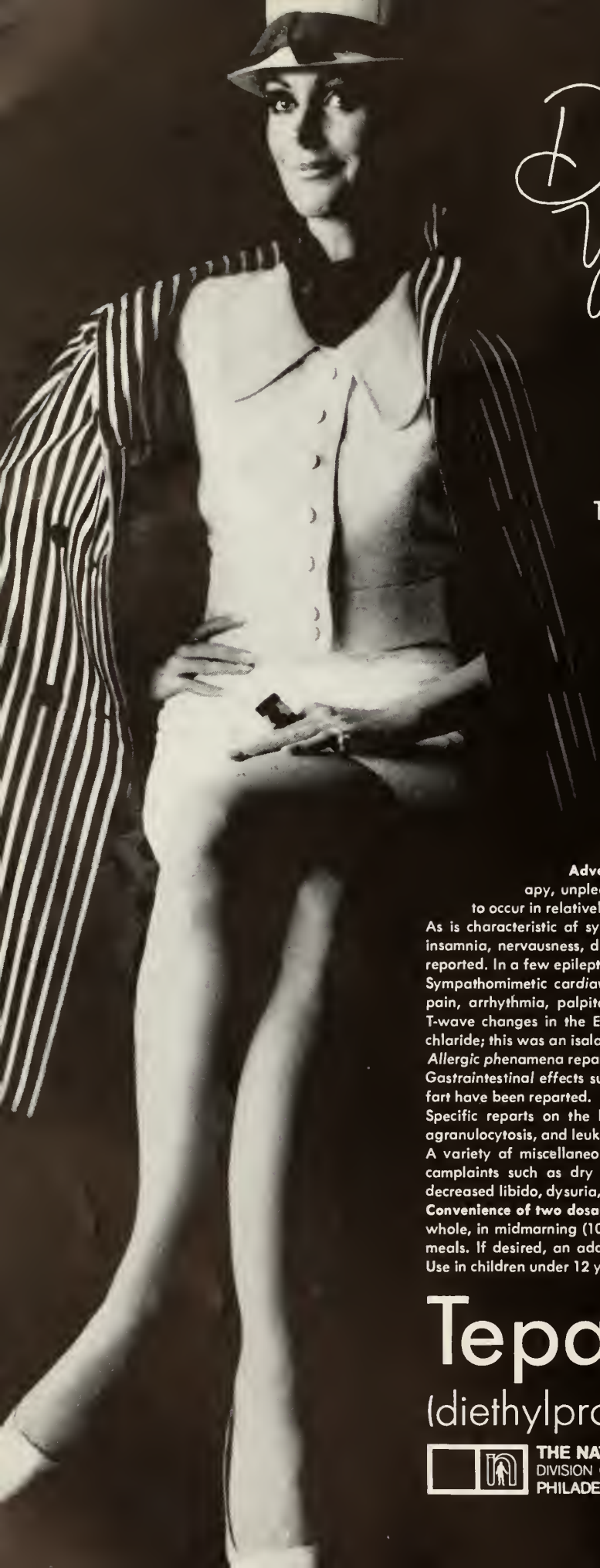
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TEPANIL—the right start in support of the weight-control program *you* recommend. It reduces the appetite. Doesn't kill it. Weight loss is significant—gradual—yet there is a relatively low incidence of CNS stimulation. Because TEPANIL works on the appetite, not on the "nerves."

Contraindications: Concurrently with MAO inhibitors, in patients hypersensitive to this drug; in emotionally unstable patients susceptible to drug abuse.

Warning: Although generally safer than the amphetamines, use with great caution in patients with severe hypertension or severe cardiovascular disease. Do not use during first trimester of pregnancy unless potential benefits outweigh potential risks.

Adverse Reactions: Rarely severe enough to require discontinuation of therapy, unpleasant symptoms with diethylpropion hydrochloride have been reported to occur in relatively low incidence.

As is characteristic of sympathomimetic agents, it may occasionally cause CNS effects such as insomnia, nervousness, dizziness, anxiety, and jitteriness. In contrast, CNS depression has been reported. In a few epileptics an increase in convulsive episodes has been reported.

Sympathomimetic cardiovascular effects reported include ones such as tachycardia, precordial pain, arrhythmia, palpitation, and increased blood pressure. One published report described T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride; this was an isolated experience, which has not been reported by others.

Allergic phenomena reported include such conditions as rash, urticaria, ecchymosis, and erythema. Gastrointestinal effects such as diarrhea, constipation, nausea, vomiting, and abdominal discomfort have been reported.

Specific reports on the hematopoietic system include two each of bone marrow depression, agranulocytosis, and leukopenia.

A variety of miscellaneous adverse reactions have been reported by physicians. These include complaints such as dry mouth, headache, dyspnea, menstrual upset, hair loss, muscle pain, decreased libido, dysuria, and polyuria.

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(continuous release form)

(diethylpropion hydrochloride)

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- **to help restore and stabilize the intestinal flora**
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Lactinex contains both *Lactobacillus acidophilus* and *L. bulgaricus* in a standardized viable culture, with the naturally occurring metabolic products produced by these organisms.

Lactinex has been shown to be useful in the treatment of gastrointestinal disturbances, and for relieving the painful oral lesions of fever blisters and canker sores of herpetic origin.[1,2,3,4,5,6,7,8]

No untoward side effects have been reported to date.

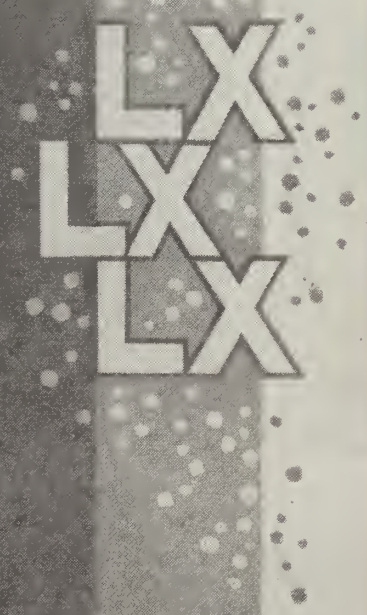
Literature on indications and dosage available on request.

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(1) Siver, R. H.: CMD, *21*:109, September 1954. (2) Frykman, H. H.: Minn. Med., *38*:19-27, January 1955. (3) McGivney, J.: Tex. State Jour. Med., *51*:16-18, January 1955. (4) Quehl, T. M.: Jour. of Florida Acad. Gen. Prac., *15*:15-16, October 1965. (5) Weekes, D. J.: N.Y. State Jour. Med., *58*:2672-2673, August 1958. (6) Weekes, D. J.: EENT Digest, *25*:47-59, December 1963. (7) Abbott, P. L.: Jour. Oral Surg., Anes., & Hosp. Dental Serv., 310-312, July 1961. (8) Rapoport, L. and Levine, W. I.: Oral Surg., Oral Med. & Oral Path., *20*:591-593, November 1965.

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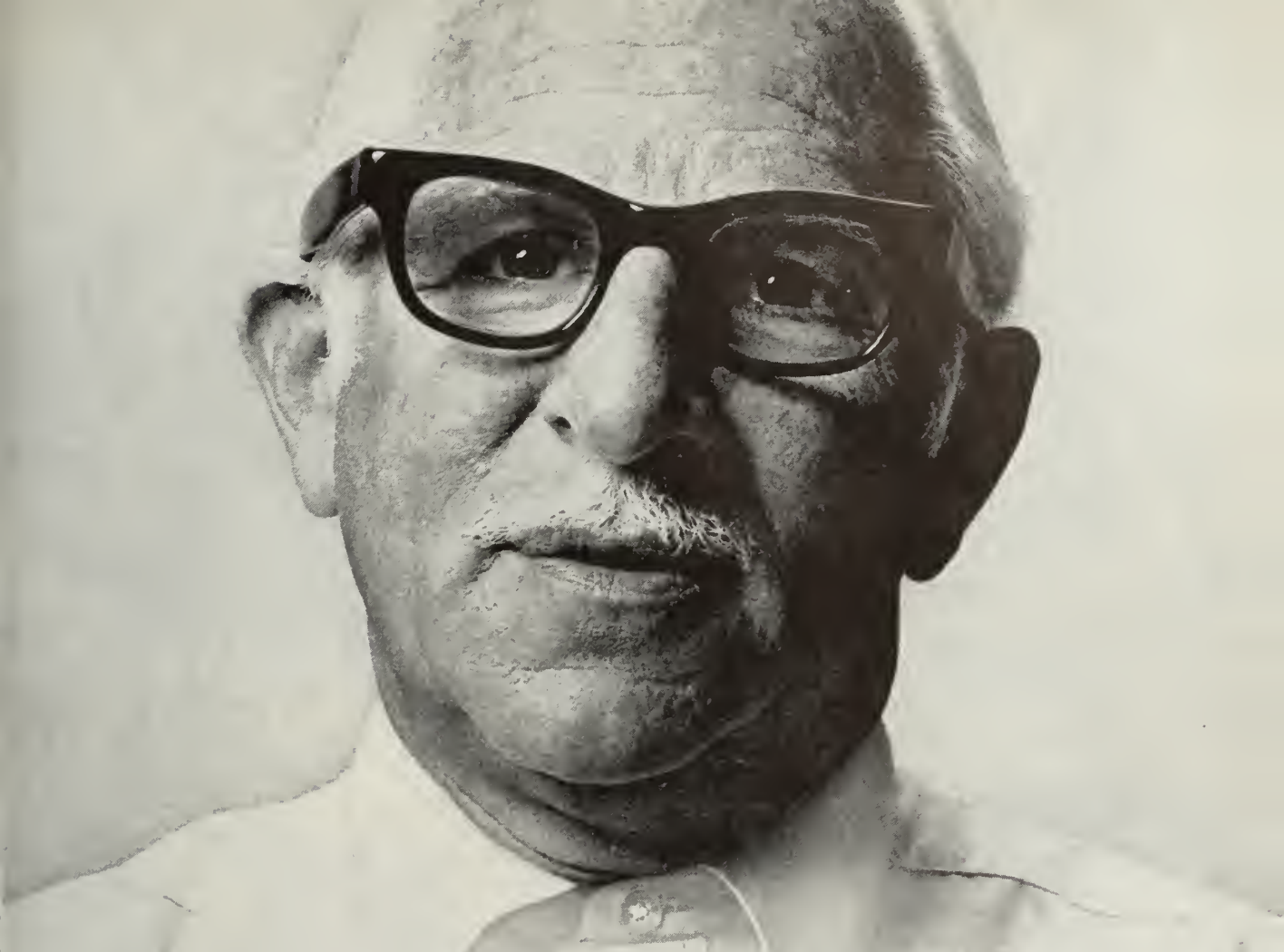
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he may be a candidate for

DECLOSTATIN® 300

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To guard susceptible patients against intestinal monilial overgrowth during broad-spectrum therapy—the protection of nystatin is combined with demethylchlortetracycline in DECLOSTATIN.

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Effectiveness: Because its antibacterial component is DECLOMYCIN Demethylchlortetracycline, DECLOSTATIN should be equally or more effective therapeutically than other tetracyclines in infections caused by tetracycline-sensitive organisms. The antifungal component, Nystatin, protects against superinfection by antibiotic-resistant fungal overgrowth (particularly monilia) in the intestinal tract.

Contraindication: History of hypersensitivity to demethylchlortetracycline or nystatin.

Warning: In renal impairment, usual doses may lead to excessive accumulation and liver toxicity. Under such conditions, lower than usual doses are indicated, and, if therapy is prolonged, serum level determinations may be advisable. A photodynamic reaction to natural or artificial sunlight has been observed. Small amounts of drug and short exposure may produce an exaggerated sunburn reaction which may range from erythema to severe skin manifestations. In a smaller proportion, photoallergic reactions have been reported. Patients should avoid direct exposure to sunlight and discontinue drug at the first evidence of skin discomfort. Necessary subsequent courses of treatment with tetracyclines should be carefully observed.

Precautions: Overgrowth of nonsusceptible organisms may occur. Constant observation is essential. If new infections appear, appropriate measures should be taken. In infants, increased intracranial pressure with bulging fontanels has been observed. All signs and symptoms have disappeared rapidly upon cessation of treatment.

Side Effects: Gastrointestinal system—anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis, pruritus ani. Skin—maculopapular and erythematous rashes; a rare case of exfoliative dermatitis has been reported. Photosensitivity; onycholysis and discoloration of the nails (rare). Kidney—rise in BUN, apparently dose related. Transient increase in urinary output, sometimes accompanied by thirst (rare). Hypersensitivity reactions—urticaria, angioneurotic edema, anaphylaxis. Teeth—dental staining (yellow-brown) in children of mothers given this drug during the latter half of pregnancy, and in children given the drug during the neonatal period, infancy and early childhood. Enamel hypoplasia has been seen in a few children. If adverse reaction or idiosyncrasy occurs, discontinue medication and institute appropriate therapy. Demethylchlortetracycline may form a stable calcium complex in any bone-forming tissue with no serious harmful effects reported thus far in humans.

Average Adult Daily Dosage: 150 mg q.i.d. or 300 mg b.i.d. Should be given 1 hour before or 2 hours after meals, since absorption is impaired by the concomitant administration of high calcium content drugs, foods and some dairy products. Treatment of streptococcal infections should continue for 10 days, even though symptoms have subsided.

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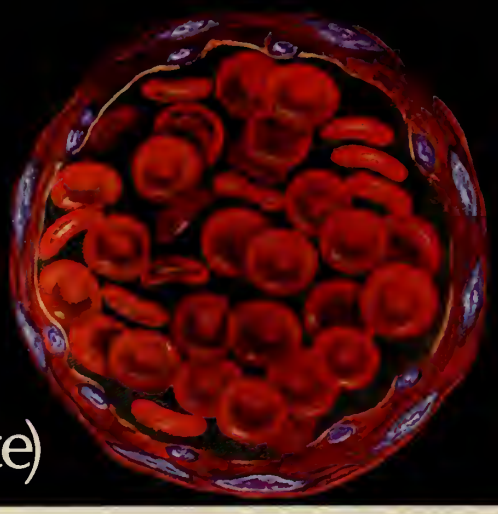
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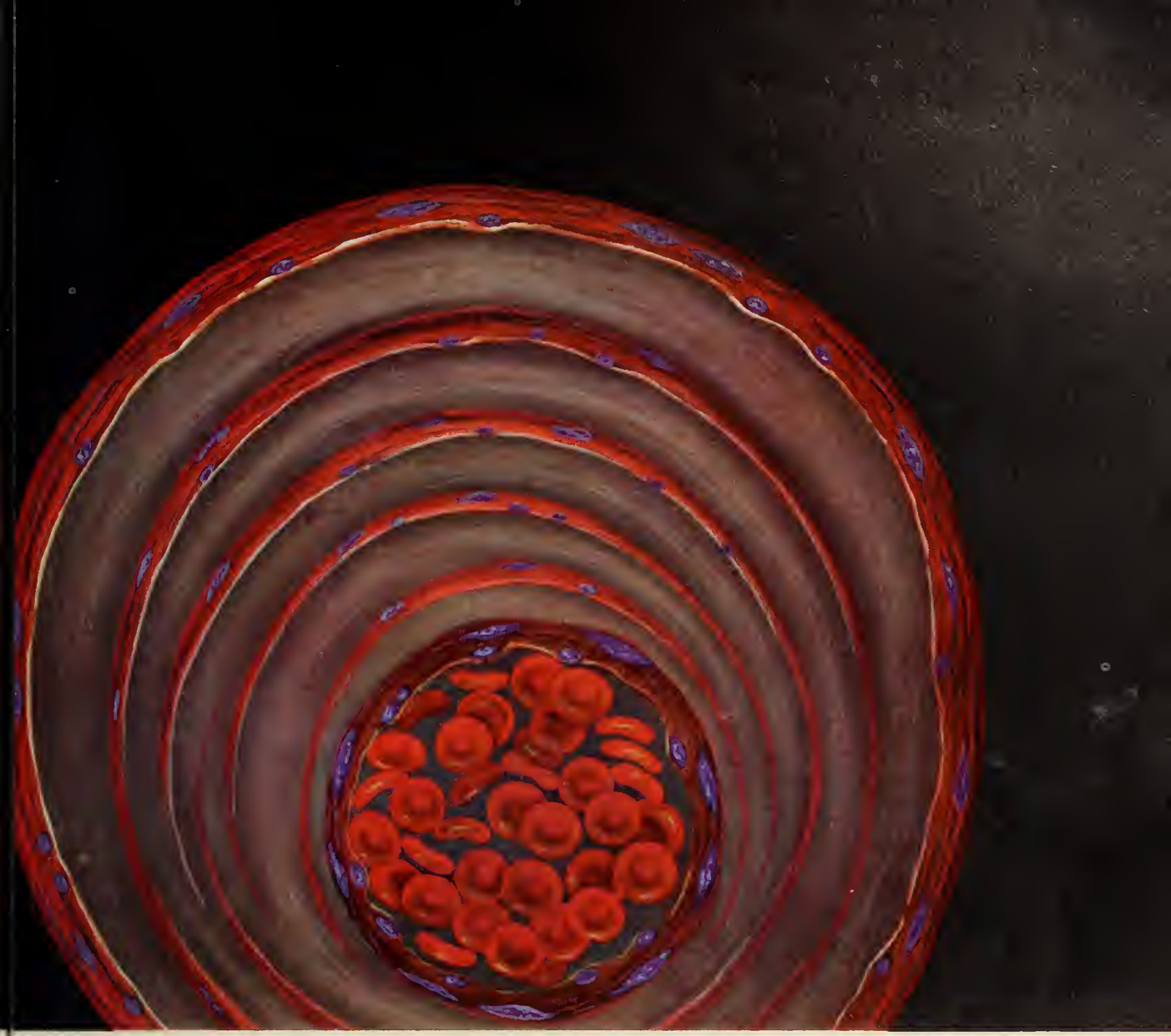
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Roniacol Timespan (nicotinyl alcohol tartrate) can make a significant contribution to effective treatment of peripheral vascular disorders. It is directed specifically toward improvement of peripheral blood flow, relief of ischemic symptoms, and the long-term management of these conditions.

Specific pharmacologic action—Roniacol (nicotinyl alcohol) acts selectively by relaxing smooth muscle of peripheral blood vessels. Onset of action is smooth and gradual, rarely causing severe flushing.

Relative freedom from side effects—Side effects that may occur occasionally with Roniacol seldom require discontinuation of therapy.

Prolonged, continuous drug release—Prolonged peripheral vasodilation is provided by sustained-release Roniacol Timespan (nicotinyl alcohol tartrate) Tablets. Part of the drug becomes available immediately, the remainder continuously over a period of up to 12 hours, and dilation of constricted peripheral vessels usually maintained. Thus, with a single dose of medication, patients can enjoy the benefits of increased peripheral blood flow in ischemic extremities for up to 12 hours.



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The prolonged action of Roniacol Timespan (nicotinyl alcohol tartrate) together with its other benefits offer a therapeutically practical measure in the long-term management of peripheral vascular disease–advantages especially important for older patients.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Conditions associated with deficient circulation; e.g., peripheral vascular disease, vascular spasm, varicose ulcers, decubital ulcers, chilblains, Meniere's syndrome and vertigo.

Caution: Roche Laboratories endorses caution in the administration of any therapeutic agent to pregnant patients.

Side Effects: Transient flushing, gastric disturbances, minor skin rashes and allergies may occur in some patients, seldom requiring discontinuation of the drug.

Dosage: 1 or 2 Timespan Tablets—150 mg nicotinyl alcohol in the form of the tartrate salt—bottles of 50 and 500.

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Nutley, New Jersey 07110

Art is a conception of peripheral vasodilation.


Food 'n mouth disease

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Preludin is indicated only as an anorexigenic agent in the treatment of obesity. It may be used in simple obesity and in obesity complicated by diabetes, moderate hypertension (see Precautions), or pregnancy (see Warning).

Contraindications: Severe coronary artery disease, hyperthyroidism, severe hypertension, nervous instability, and agitated prepsychotic states. Do not use with other CNS stimulants, including MAO inhibitors.

Warning: Do not use during the first trimester of pregnancy unless potential benefits outweigh possible risks. There have been clinical reports of congenital malformation, but causal relationship has not been proved. Animal teratogenic studies have been inconclusive.

Precautions: Use with caution in moderate hypertension and cardiac decompensation. Cases involving abuse of or dependence on phenmetrazine hydrochloride have been reported. In general, these cases were characterized by excessive consumption of the drug for its central stimulant effect, and have resulted in a psychotic illness manifested by restlessness, mood or behavior changes, hallucinations or delusions. Do not exceed recommended dosage.

Adverse Reactions: Dryness or unpleasant taste in the mouth, urticaria, overstimulation, insomnia, urinary frequency or nocturia, dizziness, nausea, or headache.

Dosage: One 25 mg. tablet b.i.d. or t.i.d. Or one 75 mg. Endurets tablet a day, taken by midmorning.

Availability: Pink, square, scored tablets of 25 mg. for b.i.d. or t.i.d. administration, in bottles of 100 and 1000.
Pink, round Endurets® prolonged-action tablets of 75 mg. for once-a-day administration, in bottles of 100 and 1000.
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For complete details, please see full prescribing information.

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For some, obesity can be a serious complication of moderate hypertension, diabetes, or pregnancy.

Preludin may be used to curb appetite in obesity associated with such conditions.

For use during pregnancy, please consult Warning paragraph. The use of Preludin in moderate hypertension should be accompanied by caution. In diabetes, the drug does not increase insulin requirements (requirements may be reduced as weight is lost).

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Preludin® phenmetrazine hydrochloride Endurets® prolonged–action tablets

PR-6611





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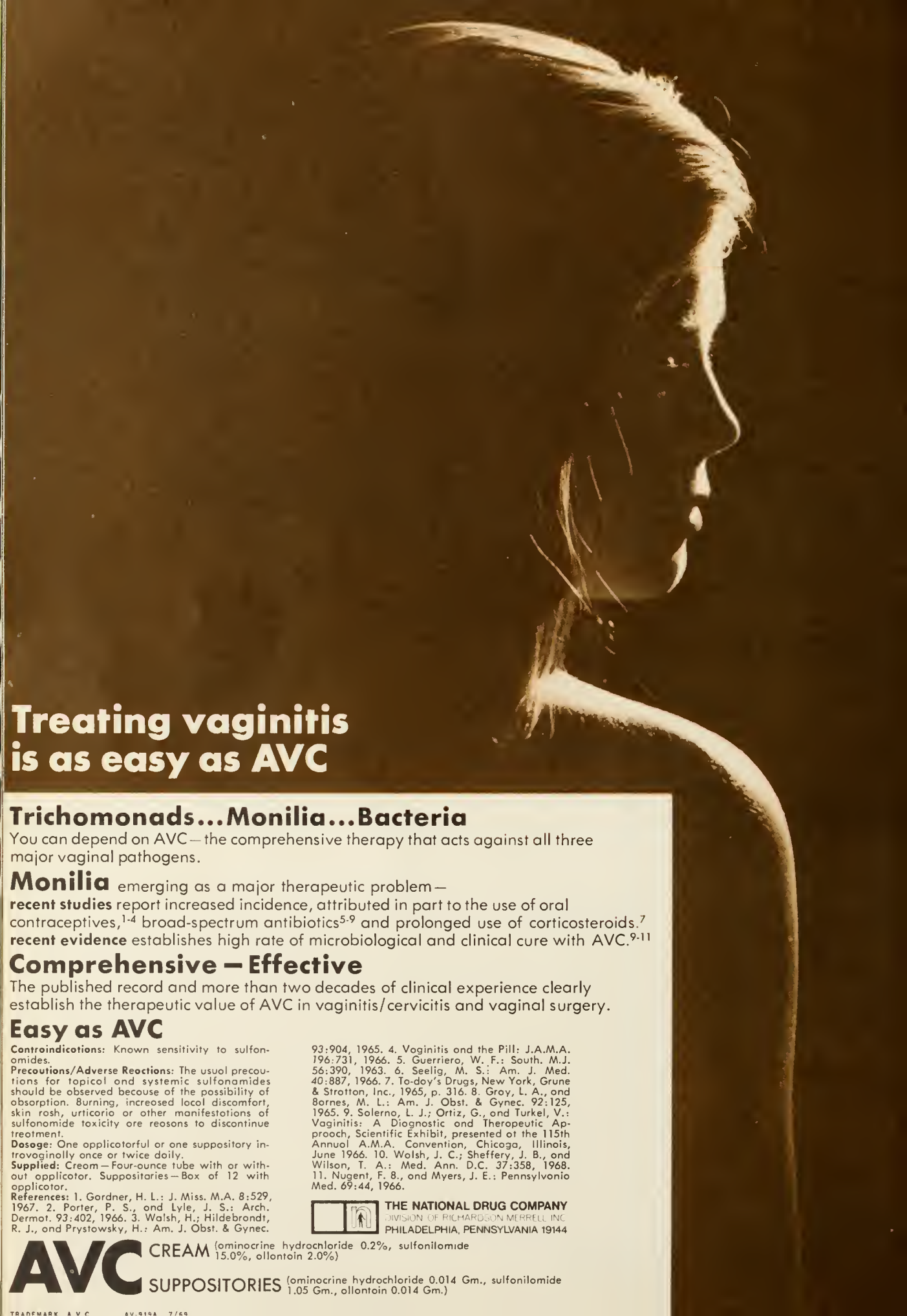
One thing patients can sleep without, particularly patients with chronic disease conditions such as arthritis, diabetes or PVD, is painful night leg cramps. Although seldom the presenting complaint, night leg cramps can tie your patients up in painful knots. Now, just one tablet of QUINAMM at bedtime can usually bring an end to shattered sleep and needless suffering. Your patients will sleep restfully—gratefully—with QUINAMM, specific therapy to prevent painful night leg cramps.

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References: 1. Gardner, H. L.: J. Miss. M.A. 8:529, 1967. 2. Porter, P. S., and Lyle, J. S.: Arch. Dermat. 93:402, 1966. 3. Walsh, H.; Hildebrandt, R. J., and Prystowsky, H.: Am. J. Obst. & Gynec. 93:904, 1965. 4. Vaginitis and the Pill: J.A.M.A. 196:731, 1966. 5. Guerriero, W. F.: South. M.J. 56:390, 1963. 6. Seelig, M. S.: Am. J. Med. 40:887, 1966. 7. Today's Drugs, New York, Grune & Stratton, Inc., 1965, p. 316. 8. Gray, L. A., and Barnes, M. L.: Am. J. Obst. & Gynec. 92:125, 1965. 9. Solerno, L. J.; Ortiz, G., and Turkel, V.: Vaginitis: A Diagnostic and Therapeutic Approach, Scientific Exhibit, presented at the 115th Annual A.M.A. Convention, Chicago, Illinois, June 1966. 10. Walsh, J. C.; Sheffery, J. B., and Wilson, T. A.: Med. Ann. D.C. 37:358, 1968. 11. Nugent, F. B., and Myers, J. E.: Pennsylvania Med. 69:44, 1966.

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Uniform Code of Medical Qualifications for Participants in Interscholastic Athletics in Maine

Russell M. Lane, M.D.*

The United States has traditionally been a sports-oriented nation and since World War II, we, as a people, have increasingly given recognition to the importance of sports and physical fitness in the character development and health maintenance of our population. Since organized athletics on the secondary school level ("Interscholastics") encompasses the greatest numerical and most accessible group of our youth in probably their most sensitive years for both physical growth and character development, we naturally turn our attention towards medical guidelines for said interscholastic sports participation. These medical guidelines are herewith formulated into this CODE, whose purpose is to give direction to state and community leaders, who are in positions to translate guidelines to actual practices, which will in turn directly effect the health and safety of our youth in their athletic pursuits. In so formulating this CODE, we all must fully realize that although sports have real health and education values, said values are not assumed without some forms of supervision and control. In the formulation, our primary commitment has been the same expressed by Dr. Thomas Quigley of Harvard in 1957; namely, that each sports participant is entitled to good medical care and good health supervision as part of his (or her) involvement in an organized athletic program.

Item I – The Record Forms For Medical History And Physical Examination, The Student-Participation And Parental-Consent Form

The accompanying forms (Appendices A, B and C) are self-explanatory regarding the requested information. Their format and content represent the combined thinking of the American Medical Association's Committee on the Medical Aspects of Sports and of the National Federation of State High School Athletic Associations, with some minor adjustments for most suitable use in Maine. It is essential that all interscholastic athletic candidates have all three forms completed and submitted to their school office annually, and that said annual evaluation be done prior to the first practice of the earliest sport in the academic year for which the student is a candidate. The completed forms are to be maintained in the school office during the student's stay in high school and for four years thereafter: – the 'Participation and Consent' form, for school administrative review, and the medical forms for appropriate review and use as medical records by the school physician or nurse, and by the athletic team-physician if there be one per se. The advantages of uncomplicated, standardized, medically-competent forms for all schools and all sports should be obvious to everyone concerned. Whether the medical history and examination is done by the student's family doctor or done by the school or team doctor, and whether the expenses involved are borne by the student and his (or her) parents or by the school; these matters are strictly not within the jurisdiction of this CODE, and must be decided within each individual school system for itself.

Item II – Grouping Of Sports By Competitive Characteristics

Although recognizing that all sports have their individual characteristics and their unique physical and mental demands on their participants, it is rather universally acknowledged that we have three general categories of competitive athletics. These broad groupings will be most helpful in establishing the workability of this CODE: and are listed with those organized interscholastic sports of Maine in each category:

Contact Sports	*Endurance Sports* (non-contact)	*Leisure Sports*
football	cross country	golf
basketball	skiing	bowling
baseball	swimming	archery
soccer	track and field	riflery
wrestling	tennis	sailing
lacrosse	volleyball	
ice hockey	gymnastics	
softball (girls)	crew	
field hockey (girls)	fencing	

It is imperative to note that the benefits of sports toward fitness, health, and character are as applicable to *girls* as they are to boys, and that this CODE is intended to apply equally to both sexes. Hopefully, we will see increasingly more programs in interscholastic athletics for our female youth, with resultant increasing beneficial effects in the factors mentioned above.

Item III – General Discussion Of Qualifying Versus Disqualifying Medical Conditions And Circumstances

The commitments of the physician in this area of athletic medicine are twofold: 1) to withhold the athlete from participation if medical reasons for such action are present, and 2) to prevent unwarranted medical disqualification of any athlete with the desire for participation. Said physician in athletic medicine must never lose

*Athletic Team Physician, University of Maine, Orono, Maine 04473.

Appendix A

Medical History Questionnaire For Sports Candidates
(to be completed by parents)

Name: Date of birth:
Home address:
Parents' name: Telephone number:

1. Significant past injuries (fractures, dislocations, concussions, major lacerations)
2. Major medical illnesses (tuberculosis, rheumatic fever, asthma, diabetes, epilepsy, jaundice, etc.)
3. Currently taking medication? What?
   Currently under a doctor's care? For what?
4. Wear glasses? or Contact Lenses?
5. Wear removable dentures (or bridgework)? or dental braces?
6. Any significant allergies? (foods, stinging insects, drugs, hives. asthma, other)
7. Any previous surgery? or medical hospitalizations?
8. Tetanus toxoid, initial series (Yes or No)
   Tetanus toxoid, most recent booster – date ( )
9. Oral (Sabin) Polio Vaccine, initial series (Yes or No)
   Oral (Sabin) Polio Vaccine, Tri-Valent booster (Yes or No)
10. Do you know of any reason why this student should not participate in interscholastic athletics? Explain.

Date: .....

.....
(Parent's or Guardian's signature)

Appendix B

Medical Examination
(to be completed by examining physician)

Name of student School
Grade Age Height Weight Pulse Blood Pressure
General appearance
Head Nose & Throat
Eyes: general Vision: R 20/ ; L 20/
Ears: general Hearing: R - ; L -
Respiratory
Cardiovascular
Liver Spleen Hernia
Musculoskeletal Skin
Neurological Psychiatric
Genitalia
Laboratory: Urinalysis
Other, if indicated
Immunizations: Tetanus Toxoid Oral Tri-Val. Polio
Comments:

"I certify that I have on this date examined this student and that, on the basis of the examination requested by the school authorities and the student's medical history as furnished to me, I have found no reason which would make it medically inadvisable for this student to compete in supervised athletic activities, EXCEPT THOSE CROSSED OUT BELOW."
Contact Sports: football, basketball, baseball, soccer, wrestling, ice hockey, lacrosse, girls' softball, girls' field hockey.
Endurance Sports: cross country, skiing, swimming, track & field, tennis, volleyball, gymnastics, crew.
Leisure Sports: golf, bowling, archery, riflery, sailing.
Estimated desirable weight level for wrestling: ..... pounds.

Signed: .....
(examining physician)
Printed name: .....
Telephone: .....

Date of Exam: .....

sight of this second commitment; he must have the courage to make decisions in this sphere, without shielding his ignorance and indecision in ultra-conservative disqualification or inaction.

Under the heading of the physician's first commitment above, the major reasons for restricting participation will be: a) when there is a disease or process which would prevent the athlete from participating and competing fairly with 'normal' persons; and b) when there is a disease or process which might be significantly and/or permanently aggravated by participation. Let it be further urged that potential athletes with obvious deficiences which preclude contact or endurance sports, be identified as early as possible in their school careers and directed towards less vigorous sports, for which they can qualify. Chronologically early re-direction will usually result in

Appendix C

Student Participation & Parental Approval Form

Full name of student: Date of birth:
Name of school:
Date signed: Place of birth:

This application to compete in interscholastic athletics for the above-named high school is entirely voluntary on my part and is made with the understanding that I have not violated any of the eligibility rules and regulations of the Maine State Principals' Association.

Student's Signature: .....

"I hereby give my consent for the above-named student: (1) to represent his school in athletic activities, except those crossed out on the accompanying form by the examining physician, provided that such athletic activities are approved by the Maine State Principals' Association; (2) to accompany any school team of which he is a member on any of its local or out-of-town trips. I authorize the school to obtain, through a physician of its own choice, any emergency medical care that may become reasonably necessary for the student in the course of such athletic activities or such travel. I also agree not to hold the school or anyone acting in its behalf responsible for any injury occurring to the above-named student in the course of such athletic activities or such travel."

Date signed: Signature: .....
(Parent or Guardian)
Address: ..... (Street)
..... (City/Town)

Note: 1) These associated forms (3) must be filled out completely and filed in the school principal's office before the student will be allowed to draw equipment, to practice, or to compete in interscholastic athletics. In addition to these three (3) standard forms, any individual school may have other specific requirements of their prospective athletes.
2) All interscholastic athletic participants are required to have an in-force, accident-coverage, insurance program approved by their school prior to the onset of their sports season and continuing therethrough.

a devoted athlete at his (or her) new and medically appropriate level in the sports spectrum, and will be a rewarding experience for all involved.

In performing the medical evaluation, the physician must exercise thoughtful judgment to arrive at his decision for or against athletic participation by the candidate. The decision must include accurate diagnoses, a reasonable knowledge of any encountered pathological process, a thorough background of information of the many types of sports and the psycho-physiological demands of each, and a full evaluation of the personality of the candidate. The decision which includes these factors will be a wise one; but omitting any of them could prove harmful to the athlete, to the team, to the physicians, and to sports in general.

A. "Matching" – This term refers to the usually desirable practice of grouping participants on the basis of comparable levels of physical size and emotional maturation. The factors of size and maturity are often hard to delineate, since they involve individual judgment to so great an extent. They will be less problematical as more and more schools develop the sorely needed interscholastic junior varsity and freshman sports programs, thereby providing athletic participation for an increasing number and spectrum of students.

In the specific area of the varsity football squad, the minimum candidate weight is suggested to be 125 lbs. at the pre-season medical evaluation, and the minimum squad size for each interscholastic contest is suggested to be at least 22, "dressed and able," regular team members.

Furthermore, in the specific area of wrestling, the practice of an athlete competing markedly above his "desirable weight level" (see Appendix B) or of sweating and starving himself down for a match markedly below said level, is to be vigorously condemned as potentially medically harmful and contrary to the true intent of all sports participation. Consequently, a sincere effort is urged upon all physicians completing Appendix B for a potential interscholastic wrestler, to arrive at the "desirable weight level" for the student in question with full consideration of the fact that it will represent their considered medical appraisal of what the weight would ideally be when the student is in good condition for athletic competition, namely wrestling. It would then be considered reasonable to restrict each wrestler to competition in the class closest to his listed "desirable weight level," and to allow him to compete one class above or move one class below, but no greater deviation from his base during any given season.

B. Acute Infections – That the acute phase of an infectious disease (contagious, or not) is a time for restriction from sports participation, will lead to almost no controversy; yet the appropriate period of convalescent restriction will be less easy to decide, and must remain an individual decision by the responsible physician in each situation. Some more common examples of temporarily disqualifying acute infections are: Chickenpox, Mumps, Measles (both kinds), Scarlet fever (or Scarlatina), Rheumatic fever, Respiratory infections, Genitourinary infections, Hepatitis, Infectious mononucleosis, Boils, Furunculosis, Impetigo, Cellulitis, Lymphangitis, Pediculosis, and "Herpes simplex gladiatorum."

C. Blood and Related Conditions – The pre-season exam will sometimes uncover these problems and point the way to appropriate treatment; in other cases, the therapy will be well established. Once again, exacting rules for disqualification, or not, will require mature and compassionate medical understanding and judgment, with

consideration of all factors involved. (See Item IV C. for recommended specific disease restrictions.)

D. Diabetes Mellitus – The tendency for marginal control at best in juvenile diabetics, the increasing desire for sports participation in a growing proportion of our youth (including said juvenile diabetics), and the requirement for having and maintaining adequate control of one's diabetes (if present) prior to being medically qualified for interscholastic sports; these factors should all be appropriately and vigorously 'used' to promote better health in this group of young people.

E. Eyes – Vertebrate animals, namely Man in our discussion, are fortunate that their means of vision comes through a *pair* of eyes; for eyes are relatively vulnerable to injury by virtue of their essential nature to almost all activities (thereby being in the center of the action), they are rather hard to devise protective equipment for without impairing their efficiency as organs of sight, and blindness in an eye from injury to said eye is not too unusual, despite good medical treatment. However, we are further fortunate in that eye injuries in sports are usually unilateral (as compared with the bilateral nature usually associated with fire and explosion), and in that a person is able to adjust to a healthy, productive life with only one functioning eye ('monocular vision'). In contrast, total blindness is a most severe handicap, and the direction of reasoning of this CODE will be to guard carefully against athletic endeavors ever leading to this tragic state. Consequently, our guidelines are reached always in response to the following question: "What would the athlete be left with in the way of vision, if he lost the vision in his best eye as a result of a sports injury?" The chart, to follow later in *Item IV,* will reflect this philosophy, and the phrase therein, "loss of function of one eye," means lack of visual correctibility to 20:80 or better.

Football players, who would not be able to participate without some form of visual correction because of the magnitude or type of their necessary correction factor, should be required to use contact lenses, which are all made of unbreakable and unshatterable plastics. Frame glasses ("spectacles") should not be allowed in this 'collision' sport because of their potential for conversion into a weapon for eye injury when dislodged.

Unbreakable and shatter-proof lenses and sturdy 'athletic' frames (those designed and manufactured specifically for use in vigorous sports), should be required for all eyeglass-wearing athletes in contact sports other than football, unless they also choose to use contact lenses.

Once again, the athlete in the special category of having "only one good eye," deserves special mention here with respect to contact sports. From football and ice hockey, he should be permanently disqualified. For the other contact sports, if he (or she) normally wears glasses in sports activities, then it should be required that they are of the 'athletic' frame with safety lenses variety, as described in the preceding paragraph. Contact lenses are not ideal protection for the "glasses-wearing" eyes in contact sports other than football, wherein the helmet and face-mask provide the primary protective barrier, and they should not be acceptable protection in contact sports for the monocular-vision athlete. For the "only-one-good-eye" athlete who does not ordinarily wear any glasses (and this is often the case actually); the use of a plane (no correction factor), safety-lens, "athletic"-frame pair of spectacles as a protective shield to his, or her, "one good eye" in non-football contact sports, is indicated and vigorously urged. The same protective use of 'plane' safety glasses (as described herein) is also in order in small-ball, non-contact sports, such as tennis, squash, hand-ball, paddle-ball (exception, golf).

F. Ears – An externally-worn hearing aid should not be worn in contact sports because it, also, represents a potential weapon for causing injury itself; and therefore, the athlete who is significantly deaf overall should be restricted from contact sports. This restriction in view of his inability to respond to team signals and to the officials' controlling directives. Unilateral deafness probably would not preclude participation in contact sports unless associated with acute or chronic infection. Previous radical mastoid surgery would probably have rendered the skull sufficiently thin in the surgical area to make subsequent contact sports unwise; however, such post-surgical cases are becoming increasingly more infrequent in this antibiotic era.

G. Respiratory – Since efficient respiratory function is so much synonomous with good athletic performance, it is pertinent to enumerate the listed (see below and in *Item IV*) potentially disqualifying respiratory conditions in addition to acute infections (see Item III A. above). "Significant pulmonary insufficiency" might refer to emphysema, bronchiectasis, or cystic fibrosis, or to a combination of these, or to other more rare pulmonary problems. Spontaneous pneumothorax (unilateral) should be restricted from contact and endurance sports for a period of 3 months following full re-expansion of the effected lung; whereas, bilateral or recurrent pneumothorax would most likely preclude any further competition in either of these sports categories for at least one year (12 months). The relatively new approach to Tuberculosis therapy referred to as "INH Chemoprophylaxis," should not be considered disqualifying provided the student athlete is clinically well and is considered as an 'inactive' TB case.

H. Cardiovascular – Perhaps no other area of the medical history and examination is more important than the cardiovascular system. For there are non-pathological heart murmurs, mild situational ("exam-room anxiety") blood pressure elevations, and transient physiological pulse irregularities; none of which should limit athletic participation. And, in like manner, there may be significant past and/or present cardiovascular problems which only a thorough, current medical history and examination will bring to clarity, and which will have a direct and vital bearing on the candidate's qualifications for various sports. The only way to arrive at the proper decision for the student in question is a full and considerate evalua-

tion of all factors, using consultants where and when indicated.

Generally speaking, valvular and/or cyanotic heart disease which have not required surgery prior to secondary school days, previously operated hearts (including the great vessels in the chest), organic hypertension (including coarctation of the aorta), active carditis (of any type) currently or within 3 previous months, significant pulse irregularities, and thrombo-embolic cardiovascular disease; are all sufficient cause for restricting both contact and endurance types of sports participation. Noteworthy exceptions to these general restrictions might be: a) a successfully surgically-repaired, and subsequently asymptomatic, patent ductus arteriosus, and b) acute superficial and/or deep thrombophlebitis; both of which should probably be only temporarily disqualifying in the same manner as an acute illness or injury.

I. Liver and Spleen – Sharp or blunt contusing injury to either of these organs can be a life-threatening event if said injury were to produce a tear in the organ capsule and subsequent intra-abdominal hemorrhage. Consequently, the pathologically enlarged liver and/or spleen, with the increased tension and fragility of its capsule, should preclude both contact and endurance sports. However, not infrequently, in young people with lean, slender, athletic bodies, either the liver or spleen may be palpable without evidence of any disease of the organ involved per se, or of any other systemic pathological condition. These cases are certainly qualified for endurance sports, but should be allowed to engage in contact sports only after a second medical opinion, only with extra protective padding to the areas, and only in consideration of frequent re-evaluations by the physician-in-charge to ascertain any change in status which might herald the early phase of some disease process.

Jaundice in the age group covered by this CODE almost invariably signifies an acute viral infection of the liver, and thereby disqualifying for all sports participation until complete recovery has occurred and has been maintained for at least six (6) weeks. Nevertheless and in addition, jaundice from any remote or less common cause should be equally restrictive to sports participation.

J. Kidneys, Herniae and Genitalia – Congenital or surgical absence of one kidney, or of one testicle, should restrict the candidate from interscholastic contact sports, as per the reasoning expressed previously in the discussion of candidates with "only one eye." In addition, for boys, when evaluating a potential athlete's genitalia, since the function of sperm production is the vital consideration for the testicle, and since an atrophic or an undescended testicle do not produce viable sperm, either of these conditions will be considered the same as an absent testicle in determining the boy's medical qualifications for participation.

Acute and chronic kidney disease cover such conditions as glomerulonephritis (Bright's disease), nephrosis, pyelonephritis, and associated renal insufficiency (uremia), and are not consistent with significant exertion, sports or otherwise, in any form.

Scrotal hydrocele is usually associated with an apparent, or an occult, inguinal hernia and is therefore afforded like consideration. In order that a blow directly over a hernia, which during sports exertion might well contain a short segment of small bowel, not lead to a serious bowel resection, this CODE directs that contact sports should be restricted until herniae (inguinal or femoral) and scrotal hydroceles are surgically repaired and are anatomically 'solid' 3 months thereafter.

K. Musculo-Skeletal System – Almost every evaluation and judgment in this realm must be individualized by the physician after thorough consideration of the condition under debate, the potential athlete as a whole, and the sport in question. Notwithstanding this fact of individualization of decision, however, some generalizations, and some specific guidelines, also, are in order and follow herewith.

Generally speaking, symptomatic structural abnormalities (congenital or acquired), acute or chronic inflammatory processes, and functional inadequacies (congenital or acquired) incompatible with the skill or contact demands of the sport in question, should all be reason enough for disqualifying the candidate until the condition has been thoroughly rectified, and until there seems little or no danger from reoccurrence and/or reaggravation by returning to participation. The vast majority of previous injuries to limbs and their joints will be judged for qualification (initial or return) on the basis of this 'functional adequacy' clause, and on the basis of whether they remain asymptomatic under vigorous sport use.

Specifically, a) because of the frequency of their occurrence, b) because of the need for medically appropriate and uniform decisions in their handling, and c) as examples of how general concepts are to be applied to actual conditions in an area of the medical evaluation, it is worth mentioning the following conditions. A history of herniated nucleus pulposus ('ruptured disc') *above* the L4-5 level, and most especially in the cervical area, should not be a candidate for contact sports because of the danger of and from reoccurrence therein. Spondylolisthesis (L5-S1 'slippage'), previous spinal surgery above the L4-5 level, and previous bony injury (fracture and/or dislocation) to the cervical spine, should all be disqualifying for contact sports on the basis of the real probability of aggravation and permanent damage via further major stress. In contrast, spina bifida occulta, lumbar spondylolysis, and 'old' disc at the L4-5 and L5-S1 areas (including remote surgical excision with or without fusion), would all be qualified, or not, primarily on the basis of current symptomatology.

Occasionally, the examining physician will encounter a candidate in whom an orthopedic surgeon has employed a device, usually metallic, to repair or facilitate healing of a fractured or diseased long bone. If said device is an actual joint prosthesis, then the candidate should be restricted from all but the most "leisure sports,"

and even then only after strict consideration of the general factors mentioned above. Candidates with intramedullary rods and those with plates and screws, would most likely not be qualified for either contact or endurance sports, although there might well be certain exceptions here. However, candidates in whom screws alone were used by the surgeon, would most likely be qualified for all sports; but not without emphasizing once again the need to consider first the symptoms-free and functional adequacy factors of the healed state.

L. Neurological System – In this section, we are discussing only the brain and associated intracranial structures, whose importance warrant consideration by themselves. The other components of the neurological system (spinal cord and peripheral nerves) are covered best in the physician's functional evaluation of the structures which they innervate, the musculoskeletal system.

Previous or current conditions which have left, or which are likely to have left, the brain and/or meninges scarred or dysfunctional; such as vascular accidents, surgery, infection, congenital abnormalities, malignancy, or trauma; should be considered disqualifying for all contact sports, and only considered qualified for endurance sports after careful deliberation of all factors. In this group would be found such not uncommon entities as sub-dural hematoma, epidural and sub-arachnoid hemorrhage, depressed skull fracture with or without laceration of brain substance, 'berry' aneurysm, hydrocephalus, and other less common clinical states.

Regarding cerebral concussions, this CODE utilizes the classification of the "Standard Nomenclature of Athletic Injuries (SNAI)" of the American Medical Association's Committee on the Medical Aspects of Sports, published in 1966, wherein the following differentiations are made:

Cerebral Concussion, Acute, 1st Degree (mild)

symptoms: No loss of consciousness; variable symptoms of temporary memory impairment, mental confusion, unsteadiness, tinnitus, and/or dizziness.

signs: Perhaps none; or, appearance of brief period of mental confusion.

Cerebral Concussion, Acute, 2nd Degree (Moderate)

symptoms: Transitory unconsciousness (up to 5 minutes) with retrograde amnesia; variable symptoms of mental confusion, tinnitus and headache.

signs: Appearance of transitory unconscious state and subsequent mental confusion.

Cerebral Concussion, Acute, 3rd Degree (Severe)

symptoms: Unconsciousness for prolonged interval (more than 5 minutes) with prolonged period of retrograde amnesia; variable symptoms, but of greater duration than that experienced in mild or moderate types; possible convulsions.

signs: Appearance of prolonged unconscious state and subsequent mental confusion.

Taking our cue from the general consensus of experienced men in athletic medicine throughout the country, we conclude that the athlete who has sustained three or more 2nd or 3rd degree cerebral concussions in his previous lifetime has reached the point of dangerously increasing susceptibility to subsequent similar responses to lessening degrees of head trauma (like the 'glass-jawed' or 'punch-drunk' boxer), and therefore, should be excluded from further contact sports regardless of the protective equipment used.

Regarding convulsive disorders and athletics, it is essential first to have an accurate diagnosis from a qualified consultant in all such cases. Jacksonian epileptics should not be qualified for contact or endurance sports in that such a condition often signifies focal intracranial disease, as noted above ("brain and/or meninges scarred or dysfunctional"). Petit mal and psychomotor epilepsy, while in their active phases and/or under treatment, ordinarily cannot be sufficiently well controlled medically to allow for contact or endurance sports participation. If the condition here in petit mal and psychomotor forms is no longer active, and if no seizures have occurred for two treatment-free years, then certainly reconsideration for competitive athletics would be in order. Grand mal epileptics, however, are more predictable in their response to medical control, and if said treatment results in them having been seizure-free for at least two years immediately prior to their evaluation for interscholastic athletics, then we would find said candidates fully qualified contingent upon continued full seizure-control. In these cases, it is imperative that the appropriate coach be appraised of the neurological background of said specific athlete.

M. Other Medical Conditions – Certainly, there are additional rare and unusual conditions not covered in the foregoing discussions. Most often in these cases the physician's decision for sports qualification, or not, will not be a difficult one, and the course of appropriate action will be quite obvious; as it would be in the case of an active malignancy, or in cases of Cerebral Palsy, Muscular Dystrophy, Myasthenia Gravis, Multiple Sclerosis, or Addison's disease. However, occasionally the decision will be less clear, as it might be in cases of Graves' Disease, Regional Ileitis, Ulcerative Colitis, or certain neuropsychiatric problems; and then the decision must be left to the physician-in-charge, with the urging once more that he keep in mind the potentially beneficial effects of athletics, not just the well-publicized possible hazards.

N. Special Considerations – As part of this CODE, there are several peripheral considerations which need to be expressed and briefly discussed. Some of these matters, which follow, will be rather definitive rules, others will be guidelines of strong urging, and others will be hopefully helpful suggestions based on personal convictions. In this regard, where each matter fits should be obvious from the wording.

1. *Dental mouthpieces* – Following the lead of the National Federation of State High School Athletic Asso-

ciations (NFSHSAA), mouthpieces should be required equipment for all interscholastic football players. They have been conclusively shown to significantly reduce dental injuries, soft tissue injuries of the face and mouth, and cerebral concussions. The most effective type of mouthpiece is the custom-made (by a dentist) style for the upper jaw.

2. *Drugs, Alcohol, and Tobacco* – The non-medical use of sedatives, tranquilizers, or stimulants, or the use of narcotics or hallucinogens, ought to lead directly to dismissal from any and all interscholastic teams for the student, or students so involved. Team rules regarding the use of alcohol and tobacco are each coach's prerogative to set as he sees fit; yet the medical committee authorship of this CODE strongly supports those coaches whose decision is to forbid the use of said alcohol and tobacco among their athletes.

3. *Insurance* – That interscholastic athletic participants are totally uninsured, or inadequately insured, seems unrealistic in 1969; but this is the case in a frighteningly significant percentage of said athletes. And although compulsory accident and injury insurance coverage for all participants in all interscholastic sports is an administrative, not medical, decision, it is endorsed here as a potential stimulus to its actuality.

4. *Medical Coverage* – This much-traveled and much-abused term can refer to an almost endless spectrum of actual circumstances depending upon local customs. This spectrum of meaning will include: a doctor and/or athletic trainer on the field, a school nurse in her office, a coach with his background of a couple of courses in health and athletic injuries during his college days plus the practical experience of his coaching years, an ambulance with its First Aid Team in the area, or a doctor in his office some variable distance removed from the sports area and yet aware of the fact that practice or a game is going on, and that he is providing the "medical coverage" (that he might be needed and called quickly to the sports area). This CODE contends that said "medical coverage" can only be provided in its true sense by a physician, and that only he (or she) can delegate the authority to someone else. Furthermore, it is strongly urged that all schools with organized interscholastic athletic programs have a responsible and committed athletic medicine advisor (who will be a physician), whose duty it should be to keep informed of *all* sports practices and at-home competition schedules within his school. For said sports practices and competitions, he will sometimes be present in person, and at other times he will stand ready to respond immediately if needed to the place summoned by his personally appointed on-the-scene representative (trainer, nurse, coach, or other). For all 'home' contests of his particular school in football and ice hockey, the advisor in athletic medicine ought to be present himself. In case of unavoidable unavailability for any of the aforementioned responsibilities, said advisor should arrange for a responsible substitute and should inform all concerned. Treatment of athletic injuries other than that of an immediate nature rendered by the "medical coverage" of practices and contests, is not within the province of this CODE, and should be handled according to local and regional medical and school policies.

5. *Primacy of Medical Decisions* – Paramount to all that has been thus far expressed, ought to be the understanding that medical decisions should be respected and adhered to without being contested or resisted. It is the physician's responsibility to render an honest and compassionate medical judgment, with willing explanations when requested, to the best of his ability, considering all factors and all interested parties to the decision; – and it will be the coach's, the school's, the student's, and his (or her) parents' joint responsibility to accept said judgment without argument. This CODE intends, as one of its most important functions, to create the climate for both sides to this mutual responsibility.

6. *Immunizations* – It should be mandatory for every student interscholastic athlete to have a current, protectively-immunized status to tetanus and to poliomyelitis (oral Sabin-type vaccine) as part of his (or her) preseason medical evaluation. Hypersensitivity status to the immunizing biological product, or valid religious objections to the use of same, must be decided individually by the physician on the basis of the relative hazards involved.

Item IV – Tabular Expression Of Material Discussed In Item III

Table 1

Systems & Conditions	*SPORTS* *Contact*	*Endurance*	*Leisure* (*x — recommended disqualification*)
A. Comparative immaturity (see football minimums)	x		
B. Acute infections	x	x	x
C. Blood and related conditions			
hemophilia and other bleeding tendencies	x		
anemia	x	x	
leukemia-lymphoma group	x	x	
D. Diabetes mellitus, inadequately controlled	x	x	
E. Eyes (see text re: contact lenses and 'safety' glasses)			
absence or loss of function of one eye	x		
severe myopia, even if correctible	x		
detached retina, even if surgically repaired	x		
F. Ears			
significant bilateral hearing loss (deafness)	x		
previous radical mastoid surgery	x		
G. Respiratory			
Tuberculosis, active and/or under ment	x	x	x
significant pulmonary insufficiency	x	x	
asthma, inadequately controlled	x	x	
H. Cardiovascular			
valvular and cyanotic ht. dis., recent carditis	x	x	x

Systems & Conditions	*SPORTS* *Contact*	*Endurance*	*Leisure*
	(x — recommended disqualification)		
previous heart or great-vessel surgery, organic hypertension, significant pulse irregularity, thrombo-embolic C-V disease	x	x	
I. Liver and Spleen			
jaundice, whatever cause	x	x	x
palpable liver and/or spleen pathological enlargement	x	x	
postural palpability (see text)	?		
J. Kidneys			
acute or chronic disease (functional insufficiency)	x	x	x
unilateral absence	x		
Herniae (inguinal and femoral) and Hydrocele	x	x	
Genitalia – absent, undescended, or atrophic testicle, unilateral	x		
K. Musculo-Skeletal (see examples in text: Item III K.)			
symptomatic structural abnormalities	x	x	x
inflammatory processes	x	x	x
functional inadequacies	x	x	x
Orthopedic surgical devices (metallic)			
intra-medullary rods	x	x	
plates and screws	x	x	
screws only	none		
prosthetic joints	x	x	x
L. Neurological (see text for discussion: Item III L.)			
conditions of brain-meningeal scarring and/or dysfunction (ex.: vascular accidents, surgery, concussions)	x		
certain convulsive disorders (see text)	x	x	
M. Other various medical conditions (see text)	case-individualized decisions		
N. Special considerations: dental mouthpieces, drugs-alcohol-tobacco, insurance, "medical coverage," primacy of medical decisions and immunizations (see preceding text).			

Item V – Code Implementation, Change, And Medical-Decision Review

A. *Implementation* – The responsibility for the distribution of this CODE, and any subsequent modifications of it, to Maine secondary schools with interscholastic athletic programs, will be cooperatively shared by the Maine State Principals' Association and the Maine State Coaches' Association. As continually stressed in all foregoing sections, the intent of this CODE is to set forward recommended guidelines having to do with the medical aspects of conducting an interscholastic athletic program; and that these guidelines will have statewide uniformity and will be based upon the endorsed values of fitness, health education, competition and safety. That this CODE will be *the* adopted set of guidelines for each Maine secondary school in their sports program can be no more strongly urged than by appealing to the universal virtues of "good sportsmanship" and "same rules for all."

In like manner, the Committee on the Medical Aspects of Sports of the Maine Medical Association will be responsible for maintaining an up-dated version of the CODE with all practicing physicians (M.D. and D.O.) in the State, and for promoting the attitude of physician adherence to the CODE in decisions concerning interscholastic athletic medicine.

B. *Change* – It is only prudent to recognize from the outset that ours is a changing culture and a changing world; that we will see changes in medical treatment and technology, changes in athletic rules, equipment and techniques, and changes in social attitudes towards sports. Some of these changes will undoubtedly necessitate modifications (additions, deletions, or re-structures) in this CODE; and provision for same, under the combined endorsement of the responsible educational and medical leadership (see Item V A., above) is herewith authorized.

C. *Medical-Decision Review* – All the rules and guidelines herein presented are not precise and absolute pro and con, and all indecisions cannot be resolved by changing said rules as per the preceding section. Many medical decisions for qualification, or conversely for disqualification, as has been repeatedly emphasized throughout the foregoing body of this CODE, involve relative and circumstantial matters, and must be individualized with a workable solution being delivered by the physician on the case in question. Even so, an occasional (and hopefully rare) situation will arise where the decision seems locally insoluble, and provision is herewith made for a State Review Panel to settle said indecisions. This Review Panel will consist of one member from the Maine State Principals' Association, one member from the Maine State Coaches' Association, and one member from the Sports Medicine Committee of the Maine Medical Association. Cases devoid of local decision will only be considered when submitted jointly by the responsible local medical and educational authorities. The Review Panel will not function to substitute for local work and understanding, nor will it function to settle local personal disputes.

Item VI – Source Material For CODE

1. "A Guide for Medical Evaluation of Candidates for School Sports" – Second Edition (1968) – Committee on the Medical Aspects of Sports, American Medical Association.
2. "Standard Nomenclature of Athletic Injuries" – 1966 – Committee on the Medical Aspects of Sports, American Medical Association.
3. "Medical Policy in Athletics" from the Staff Manual of the Department of Physical Education and Athletics, University of Maine (Orono) – in publication.

Continued on Page 268



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Indication—Oral contraception.

Contraindications—Thrombophlebitis, thrombaembolic disorders, cerebral apoplexy or a past history of these conditions, markedly impaired liver function, known or suspected carcinoma of the breast, known or suspected estrogen-dependent neoplasia, undiagnosed abnormal genital bleeding.

Warnings—Watch for the earliest manifestations of thrombotic disorders (thrombophlebitis, cerebrovascular disorders, pulmonary embolism, retinal thrombosis); if present or suspected discontinue the drug immediately.

British studies reported in April 1968[1,2] estimate there is a seven- to tenfold increase in mortality and morbidity due to thromboembolic diseases in women taking oral contraceptives. In these controlled retrospective studies, involving 36 reported deaths and 58 hospitalizations due to "idiopathic" thrombaembolism, statistical evaluation indicated that the differences observed between users and non-users were highly significant. The conclusions reached in the studies are summarized in the table below:

Comparison of Mortality and Hospitalization Rates Due to Thrombaembolic Disease in Users and Non-Users of Oral Contraceptives in Britain.

Category	Mortality Rates		Hospitalization Rates (Morbidity)
	Age 20-34	Age 35-44	Age 20-44
Users of Oral Contraceptives	1.5/100,000	3.9/100,000	47/100,000
Non-Users	0.2/100,000	0.5/100,000	5/100,000

No comparable studies are yet available in the United States. The British data, especially as they indicate the magnitude of the increased risk to the individual patient, cannot be applied directly to women in other countries in which the incidences of spontaneously occurring thromboembolic disease may differ.

Discontinue medication pending examination if there is sudden partial or complete loss of vision, or sudden onset of proptosis, diplopia or migraine. Withdraw medication if papilledema or retinal vascular lesions are found.

Since the safety of Ovulen in pregnancy has not been demonstrated, it is recommended that pregnancy be ruled out for any patient who has missed two consecutive periods before continuing the contraceptive regimen. If the patient has not adhered to the prescribed schedule the possibility of pregnancy should be considered at the first missed period.

A small fraction of the hormone agents in oral contraceptives has been identified in the milk of mothers receiving these drugs. The long-range effect on the nursing infant cannot be determined at this time.

Precautions—Pretreatment physical examination should include special reference to the breasts and pelvic organs, and a Papanicolaou smear.

Endocrine and possibly liver function tests may be affected by Ovulen. Therefore, it is recommended that such tests if abnormal be repeated after the drug has been withdrawn for two months.

Pre-existing uterine fibromyomas may increase in size under the influence of progestogen-estrogen preparations.

Because these agents may cause some degree of fluid retention, conditions which might be influenced by this factor, such as epilepsy, migraine, asthma, cardiac or renal dysfunction, require careful observation.

In breakthrough bleeding, and all irregular vaginal bleeding, consider nonfunctional causes. Adequate diagnostic measures are indicated in undiagnosed vaginal bleeding.

Carefully observe patients with a history of psychic depression and discontinue the drug if severe depression recurs.

Any possible influence of prolonged Ovulen therapy on pituitary, ovarian, adrenal, hepatic or uterine function awaits further study.

A decrease in glucose tolerance has occurred in a significant percentage of patients on oral contraceptives. The mechanism of this decrease is obscure. For this reason, diabetic patients should be observed carefully while receiving Ovulen.

Because of the effects of estrogens on epiphyseal closure Ovulen should be used judiciously in young patients in whom bone growth is not complete.

The age of the patient constitutes no absolute limiting factor, although Ovulen therapy may mask the onset of the climacteric.

The pathologist should be informed of Ovulen therapy when relevant specimens are submitted.

Adverse Reactions—A statistically significant association has been shown between use of oral contraceptives and the following serious adverse reactions: thrombophlebitis, pulmonary embolism.

Although available evidence is suggestive of an association, such a relationship has been neither confirmed nor refuted for the following serious adverse reactions: cerebrovascular accidents, neuro-ocular lesions, e.g., retinal thrombosis and optic neuritis.

The following adverse reactions are known to occur in patients receiving oral contraceptives: nausea, vomiting, gastrointestinal symptoms (such as abdominal cramps and bloating), breakthrough bleeding, spotting, change in menstrual flow, amenorrhea during and after treatment, edema, chloasma or melasma, breast changes (tenderness, enlargement, secretion), change in weight, changes in cervical erosion and cervical secretions, suppression of lactation when given immediately post partum, cholestatic jaundice, migraine, allergic rash, rise in blood pressure in susceptible individuals, mental depression.

Although the following adverse reactions have been reported in users of oral contraceptives, an association has been neither confirmed nor refuted: anovulation post treatment, premenstrual-like syndrome, changes in libido, changes in appetite, cystitis-like syndrome, headache, nervousness, dizziness, fatigue, backache, hirsutism, loss of scalp hair, erythema multiforme and nodosum, hemorrhagic eruption, itching. The following laboratory results may be altered by oral contraceptives: hepatic function: increased sulfobromophthalein and other tests; coagulation tests: increase in prothrombin, Factors VII, VIII, IX and X; thyroid function: increase in PBI and butanol extractable protein bound iodine, and decrease in T^3 uptake values; metyrapone test; pregnanediol determination.



References: 1. Inman, W. H. W., and Vessey, M. P.: Brit. Med. J. 2:193-199 (April 27) 1968. 2. Vessey, M. P., and Doll, R.: Brit. Med. J. 2:199-205 (April 27) 1968.

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Evaluation of Radiological Diagnosis of Gastric Carcinoma

JOSEPH S. BRITO, M.D.†

Gastric carcinoma, although its incidence is gradually decreasing in the U.S. and in many parts of the world, still remains one of the more common types of human's cancer.

The fluoroscopic and radiographic examinations still are the most universally used methods of investigation of gastric lesions. The usefulness of cytological testing is obviously a good complementary method, but it requires technical skills. Likewise, the limitations in the use of flexible gastroscope and endoscopic cameras make the radiological examination the most *valuable* method of detection of lesions of the stomach from a practical standpoint.

This paper presents a review of 100 cases of gastric carcinomas examined radiologically. Most of them were studied during my association with the Boston City Hospital (1957-60) and the remaining 24 during the last eight years in my general hospital and private practice.

A review of literature reveals a broad range of claimed accuracy in the roentgenological method of diagnosis of gastric lesions. Correct diagnosis has been reported from 57% to 95% of lesions studies.[1,2,5,8]

It must be emphasized that high levels of accuracy were obtained when a large number of both benign and malignant lesions were studied and when the patients included those in the younger age groups from whom, as is to be expected, better cooperation is usually obtained during fluoroscopy. That conclusion was also reached in a study of a series of more than 300 lesions, both benign and malignant, completed recently.*

Material and Methods

Of the 100 cases studied, 87 had gastric cytological examinations prior to or for confirmation of the roentgenological examination. In 68% of the total cases, the roentgenological diagnosis was established on first examination. In 32, a second examination was performed for confirmation of the first or because first attempt was unsatisfactory.

In the majority of cases, examinations were performed by the resident staff and checked by one or more staff radiologists (B.C.H.).

The examinations were usually carried out in a routine fashion with special procedures performed when indicated. However, in 50% of the cases the manipulation of the patients was limited (clinically acute condition and poor cooperation). The final roentgenological diagnosis was based upon general standard fluoroscopic examinations and informative roentgenograms obtained during and after that examination.

For purpose of this review, roentgenological diagnoses such as "probably malignant," "filling defect with ulceration," "possibly malignant," "ulcerated indurative lesion," "most probably carcinoma," were considered *positive for malignancy*.

Cytologic diagnoses were recorded according to the standard Papanicolaou classification. Class V was "unequivocally," Class IV "strongly suggestive" of malignancy, Class III was "suspicious" of malignancy, and Classes I-II were "benign."**

The age of the patients ranged from 43 to 89 (Table 1); 60% of the patients were between 66 and 80 years of age. The average age was 70.

Results

Of the 100 cases in which radiological examinations were performed 37 were solely infiltrative, 24 were manifested by a single polypoid defect, 21 were ulcerative and indurative, 12 revealed both an infiltrative and indurative and fungating lesion, and 6 revealed a polypoid defect with ulceration (Table 2). Of these 100 lesions observed (but not necessarily diagnosed correctly), 26 were located in the antrum, 19 in the body of the stomach, 19 in the fundus, and 36 were too diffused to be so closely localized. Positive diagnoses were made in 79 (79%). An incorrect diagnosis was made in 21 (21%) of cases. Of the 79 cases in which radiology provided the correct diagnosis, 30 were infiltrative lesions, 17 were in ulcerative-infiltrative lesions (81% of 21 such lesions), 17 were in polypoid defects (71% of a total of 24 such defects), 5 were in the polypoid and ulcerated group (83% of the total of 6), and 10 were in the infiltrative and fungating group (83% of the 12 in that category). Of the 21 incorrect diagnoses, 7 were noted in the infiltrative group (or 18% of the 37 cases of infiltrative lesion), 4 were of the ulcerative-infiltrative category (19% of that group), 7 were polypoid defects (29% of the polypoid group), 1 was of a polypoid and ulcerative type lesion, and 2 were of the fungating-infiltrative type (Table 3). Of the 21 errors, 7 involved polypoid defects or 33% of all errors, whereas polypoid defects numbered only 25% of the 87 lesions reported. It is evident that polypoid defects presented the greatest difficulty in evaluation. Better than the average accuracy of 80% was obtained in evaluating the infiltrative lesions, the polypoid and ulcerative group, and the infiltrative-fungating group.

Comparison with Cytological Examination

In 87 cases where cytological examination was performed, the results were positive or strongly suspicious in

†Radiologist, St. Joseph Hospital, Bangor, Maine 04401.

*J. S. Brito and M. Goldberg (unpublished data).

**Most of the cytological results were reviewed by Dr. Jay Slosberg.

TABLE 1

DISTRIBUTION OF PATIENTS AMONG AGE GROUPS

Age Groups	*Number*
41-45	4
46-50	2
51-55	1
56-60	11
61-65	12
66-70	25
71-75	22
76-80	15
81-85	6
86-90	2

TABLE 2

TYPE AND LOCATION OF LESION

		Location of Lesion			
Type of Lesion	*No. of Cases*	*Antrum*	*Body*	*Fundus*	*More Than One Segment*
Solely Infiltrative	37	10	3	9	15
Ulcerative – – Infiltrative	21	9	5	2	5
Single Polypoid Defect	24	5	6	4	9
Polypoid Defect Ulceration	6	1	3	1	1
Infiltrative – – Fungating Defect	12	1	2	3	6
Total Recognized or Suspected	100	26	19	19	36

TABLE 3

DEGREE OF ACCURACY OF RADIOLOGICAL DIAGNOSES IN RELATION TO TYPE OF LESION

		Correct Diagnosis		*Incorrect Diagnosis*	
Type of Lesion	*Total No.*	*No.*	*%*	*No.*	*%*
Solely Infiltrative	37	30	81.8	7	18.2
Ulcerative and Infiltrative	21	17	80.9	4	19.1
Single Polypoid Defect	24	17	70.8	7	29.2
Polypoid Defect and Ulceration	6	5	83.3	1	16.7
Infiltrative and Fungating Defect	12	10	83.3	2	16.6

69 cases (79%), and incorrect in 18 cases (21%) (Table 4). In only 4 cases did both methods miss the correct diagnosis. In 56 instances, both methods agreed on the correct diagnosis. Malignancy was detected or suspected by one or the other of the methods in 83 cases (95%). It is apparent that a complementary relationship does exist between the two methods.

The complementary value was reflected almost equally in each morphologic type of lesion. Again, the polypoid group provided the most difficulty; there were 5 incorrect diagnoses out of 20 cases with cytological examination.

An evaluation of radiologic diagnostic accuracy as compared with cytological diagnosis with respect to location of the lesion has been made. Of interest was the fact that the highest accuracy by radiological diagnosis

TABLE 4

OVERALL ACCURACY OF DIAGNOSIS
(87 cases)

	% Correct	*% Incorrect*
Radiological Examination	79	21
Cytological Examination	79	21

TABLE 5

COMPARISON OF RADIOLOGICAL AND CYTOLOGICAL DIAGNOSTIC RESULTS IN RELATION TO LOCATION OF THE LESION
(87 cases)

		Lesion Detected or Suspected by Radiological Examination		*Malignancy Detected or Suspected by Cytological Examination (Class III-IV-V)*	
Location of Lesion	*No. of Lesions Examined*	*No.*	*%*	*No.*	*%*
Antrum	21	15	71.4	16	76.1
Body	19	15	80.0	14	73.6
Fundus	18	14	78.0	16	89.0
Diffuse	29	25	86.2	23	79.3
Total	87	69	79	69	79

TABLE 6

COMPARISON OF RADIOLOGICAL AND EXFOLIATIVE CYTOLOGICAL DIAGNOSTIC ACCURACY IN RELATION TO LOCATION OF LESION

Diagnosis	*Antrum*	*Body*	*Fundus*	*Diffuse*	*Total*
Correct, by Radiological Examination	15	15	14	25	69
Correct, by Cytological Examination	11	12	11	22	56
Incorrect, by Cytological Examination	4	3	3	3	13
Incorrect, by Radiological Examination	6	4	4	4	18
Correct, by Cytological Examination	4	3	3	4	14
Incorrect, by Cytological Examination	2	1	1	0	4

occurred with diffuse lesions (86.2%), whereas the lowest, 71.4% was observed in antral lesions. The cytologic method was correct in 69 cases. The overall accuracy of both groups was revealed to be nearly identical with respect to lesions of the antrum and body; however, radiology was considerably more accurate than cytology with respect to diffuse lesions, while the cytologic method detected a significantly higher number of cases (89%) in which the lesion involved the fundus (Table 5). Even though the overall accuracies with respect to lesions of the antrum and body were similar, it is further noted that of the 6 cases of antral lesions in which x-ray diagnosis was incorrect, cytologic diagnosis was correct in 4. Furthermore, of those 4 cases involving lesions of the body

TABLE 7

ACCURACY OF ENDOSCOPIC DIAGNOSES IN RELATION TO LOCATION OF LESIONS

Location of Lesion	*No. of Lesions Examined*	*Diagnosis*		
		Correct	*Equivocal*	*Incorrect*
Antrum	8	4	2	2
Body	4	2	1	1
Fundus	12	8	1	3
Diffuse	13	4	6	3
Total	37	18 (50%)	10 (25%)	9 (25%)

TABLE 8

COMPARISON OF RADIOLOGICAL AND ENDOSCOPIC DIAGNOSTIC ACCURACY IN RELATION TO LOCATION OF LESION (37 cases)

Diagnosis	*Antrum*	*Body*	*Fundus*	*Diffuse*	*Total*
Correct, by Radiological Examination	5	2	8	7	22
Correct, by Endoscopic Examination	3	1	8	2	14
Equivocal, by Endoscopic Examination	0	0	0	3	3
Incorrect, by Endoscopic Examination	2	1	0	2	5
Incorrect, by Radiological Examination	4	2	4	5	15
Correct, by Endoscopic Examination	1	1	2	2	6
Equivocal, by Endoscopic Examination	2	1	0	1	4
Incorrect, by Endoscopic Examination	1	0	2	2	5

in which x-ray diagnosis was incorrect, cytological diagnosis was correct in 3 (Table 6). Again, there is further confirmation of the complementary value.

COMPARISON WITH ENDOSCOPIC AND GASTROSCOPIC EXAMINATION

Endoscopic examinations were performed in 37 cases (Table 7). A correct diagnosis was made by this method in 18 cases (50%). Of the 37 lesions examined, 8 were antral, 4 were located in the body of the stomach, 12 were fundal, and 13 involved more than one anatomic area. Of the antral lesions, 4 were correctly diagnosed endoscopically, 2 yielded equivocal findings, and 2 were incorrectly diagnosed. Of the 4 lesions of the body, 2 were correctly diagnosed, 1 equivocally and 1 was incorrectly evaluated. Of the 12 fundal lesions, 8 were correctly diagnosed, whereas 4 were not. Of 13 diffused lesions, 4 were correctly interpreted, 6 equivocally and 3 incorrectly. This is in contrast to previous experience, which has indicated more difficulty with lesions of the fundus than with other types.



Fig. 1. An infiltrating type carcinoma of the pyloric antrum with no other roentgenological signs besides rigidity and narrowing of the lumen. This typifies the location of an early infiltration most difficult for the Radiologist to interpret.



Fig. 2. An annular type infiltration in the pyloric antrum.

This may be explained by a review of the cases examined; in 6 out of 12 cases correctly diagnosed, the lesion of the fundus had extended into the esophagus and was seen before the esophagoscope entered the stomach.

Of the 37 cases in which endoscopic examination was performed, radiological examination provided a correct diagnosis in 22 cases or 60% of the total (Table 8). Although the initial impression could have been that the endoscopic accuracy of 50% was not comparable to the overall radiological accuracy of 79%, it is noteworthy that endoscopic examination was performed on a group



Fig. 3. This is an example of extensive infiltrating carcinoma – Scirrhus type.



Fig. 4. A disk-shaped ulcer associated with an infiltrating carcinoma of the lesser curvature.



Fig. 5. A large infiltration of the pyloric antrum with an ulcer in its greater curvature side.

of patients in whom the radiologic accuracy was only 60%. Thus, this implies a selection of cases presenting a more difficult diagnostic problem. With respect to the 4 cases of antral malignancy in which radiological diagnosis was incorrect, endoscopic diagnosis was correct in 1, equivocal in 2 and incorrect in 1. Of the 12 lesions of the fundus, radiological and endoscopic diagnoses correctly agreed in 8. Endoscopic diagnosis incorrectly interpreted those 4 cases in which radiological examination likewise provided an incorrect diagnosis. Endoscopic diagnosis equivocated in 3 and was incorrect in 2 of the 7 cases of diffused involvement that were correctly diagnoses after radiological examination. Of the 5 cases of diffused involvement in which x-ray diagnosis was incorrect, endoscopic diagnosis was correct in 2, equivocal in 1, and incorrect in 2.

Though endoscopic diagnosis made a creditable average in lesions of the fundus, commonly thought nearly inaccessable, in all of the 8 diagnostically correct cases radiological diagnosis was likewise correct, and endoscopic examination failed to provide a correct diagnosis in the 2 fundal lesions that were incorrectly diagnosed after radiological examination. Although the number of



Fig. 6. A single polypoid type tumor of the fundus.



Fig. 7. Spot film showing an infiltrating and fungating carcinoma of the body of the stomach.



Fig. 8. Ulcerating and polypoid defect in the fundus.

cases is small, our figures do reveal that endoscopic examination was of some complementary value, but this value did not approximate that of gastric cytological and radiological examination.

Discussion

The accuracy of radiological diagnosis in this series was 79%; i.e., 79% of malignant lesions of the stomach were detected. It was not possible to state the exact nature of the lesion in few instances, although the fact that the lesion was "probably malignant" indicated in most cases the malignant nature of the process. The figures for identification by roentgenology were presented with a full appreciation of the fact that any gross diagnosis of a lesion, whether by the surgeon with the tissue in his hand at the operating table or by the radiologist examining his films, is at the most presumptive. The comparison with cytological results in this paper indicates that, despite this presumptive tool, the accuracy of the identification was equal to that provided by the microscopic method.

It seems clear that both morphologic type and anatomic location have considerable effect upon accuracy in the radiological diagnosis of malignant lesions. Our studies have indicated that x-ray examinations are difficult to interpret when the lesion is morphologically polypoid. Difficulty is also encountered when lesions are located in the fundus and the antrum.

The comparative evaluation of the radiological and exfoliative cytological methods reveals a definite complementary relationship. Though the overall figures for accuracy of each are similar, together they result in more cases, being correctly diagnosed by one or the other method than by either alone. With respect to morphologic type: it does not appear that exfoliative cytological meth-

TABLE 9

COMPARISON OF RADIOLOGICAL AND EXFOLIATIVE CYTOLOGICAL DIAGNOSTIC ACCURACY IN RELATION TO TYPE OF LESION (87 cases)

Diognosis	*Solely Infiltrative*	*Ulcerative & Infiltrative*	*Simple Polypoid*	*Ulcerative & Polypoid*	*Infiltrative & Fungating*	*Total*
Correct, by Radiological Examination	27	14	15	4	9	69 (79%)
Correct, by Cytological Examination	22	11	11	4	8	56
Incorrect, by Cytological Examination	5	3	4	0	1	13
Incorrect, by Radiological Examination	6	4	5	2	1	18 (21%)
Correct, by Cytological Examination	4	3	4	2	1	14
Incorrect, by Cytological Examination	2	1	1	0	0	4

ods provides diagnoses of a particular type of lesion more efficiently but that within each classification, each method may provide correct diagnoses of a significant number of lesions that the other missed (Table 9). To some extent this is also true when the comparison is applied to lesions with respect to their location. However, in addition, it was noted that whereas radiological examination provided diagnoses in less than half of the lesions of the antrum and fundus respectively, gastric cytological methods were average and better than average in these two same groups respectively.

Similar complementary relationships have been observed in other studies.[2,3,4]

Evaluating endoscopic diagnosis with that of x-ray in the same lesions, there is a lesser degree of concurrence of results. This conclusion was based on only a small number of cases and by no means implies a decreased value of endoscopic methods in cases when an indication clearly exists. Other studies reveal slight deviation in findings comparatively.[6,7,9,10,11]

The difficulty with any diagnostic tool in the diagnosis of gastric malignancy is again emphasized. It is felt that radiology and exfoliative cytology provide two methods of comparable accuracy with definite complementary values and that both be employed, together with clinical observations, when evaluating a questionable malignant lesions.

SUMMARY

One hundred cases of proven gastric malignancy are presented and discussed. Radiologic accuracy with respect to morphologic type and anatomic location is illustrated. This accuracy is compared to that of exfoliative cytology and endoscopy under the same consideration. Complementary relationships between radiologic and those methods are shown and elaborated upon.



Fig. 9. A large infiltrating and fungating carcinoma involving the two-thirds of the stomach.



Fig. 10. An advanced infiltrating and fungating type carcinoma.



Fig. 11. A fungating mass with an infiltration along the lesser curvature of the fundus and part of the body.

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Brief Recording
Septicemia Due To Moraxella Liquefaciens

D. P. Sellers, M.D., Joe R. Wise, Jr., M.D., Howard A. Semer, M.D.*

Serious infection due to Moraxella species a pleomorphic gram-negative bacillus, is being reported with increasing frequency. This organism, previously thought to be of low pathogenicity, has recently been isolated from two patients with endocarditis.[1,2] In the following case, *Moraxella liquefaciens* was repeatedly isolated from the blood of a man with chronic lymphocytic leukemia and hypogammaglobulinemia.

Case Report

A 44-year-old white man with chronic lymphocytic leukemia since 1959 entered the hospital on February 5, 1967 complaining of fever, sweating, and muscle aches, particularly in the thighs, all beginning one week before admission. He has a history of frequency urinary tract infections and bronchitis. He had been taking chlorambucil (Leukeran®) 12 mgm daily.

The temperature was 103.8° F and the pulse rate 120. There was a grade II/VI systolic ejection-type murmur, best heard at the apex, and was unchanged from previous examinations. The heart was not enlarged and the chest was clear. The liver and spleen, neither of which were previously enlarged, were palpated 3 cm. below the right and left costal margins, respectively. There were no embolic phenomena seen.

The white cell count was 39,000 with 96% lymphocytes and the hemoglobin 11 gms per 100 ml. The total serum protein was 5.9 gms. and gamma globulin 7.5%. Immunoelectropheresis disclosed "moderate decrease" in both IgG and IgA and IgM was "not visualized."

On the third hospital day he developed a maculopapular rash which appeared on the palms and soles, and to a lesser extent the forearms, legs, and back of the neck. The lesions were descreet, 3-5 mm in diameter and blanched with pressure. There was no pruritis. Eight blood culture taken during the first three days of hospitalization grew gram-negative pleomophic organisms subsequently identified by the Communicable Disease Center in Atlanta as *Moraxella liquefaciens.*

Intravenous penicillin, 20 million units daily was begun after the rash appeared. The myalgias, fever, and rash quickly subsided. He received ten days of intravenous penicillin and his subsequent course was uneventful.

Discussion

This is the first time Moraxella infection has been reported in an immunologically altered host. In a patient like this with leukemia and hypogammaglobulinemia, however, it is not too surprising to encounter infections with unusual organisms such as these.

In the past Moraxella species, a pleomorphic gram-negative bacillus, has seldom been reported as the cause of serious infection in man. *Moraxella liquefaciens* was previously thought only to produce conjunctivitis in man.[3] Recently, however, there appeared reports of two cases of bacterial endocarditis due to Moraxella.[1,2] Although our patient had a heart murmur, it was unchanged from previous examinations, and the evidence for endocarditis as the source of the septicemia was circumstantial. We could not determine whether the hepato-splenomegaly, which persisted, was due to leukemia or infection. The simultaneous occurrence of myalgias, and skin rash involving primarily the palms and soles has not been noted in the cases of Moraxella septicemia previously reported.

These organisms which have conventionally been considered of low pathogenicity are now being found capable of causing life-threatening infections, both in the altered and apparently normal subject.

Summary

A case of septicemia due to *Moraxella liquefaciens* in a 41-year-old man with chronic lymphatic leukemia associated with hypogammaglobulinemia is presented. The infection was accompanied by myalgias, and an unusual macular rash involving primarily the palms and soles. The patient responded readily to intravenous penicillin therapy.

Acknowledgment

We are indebted to Dr. Robert E. Weaver of the Communicable Disease Center for identifying the organism, and to Dr. Jack A. Barnett for reviewing the manuscript.

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Special Article

Maine State Rubella Vaccination Program

O. Thomas Feagin, M.D.*

Rubella was first recognized as a clinical entity in 1815, and was long considered a relatively minor illness. In the United States, approximately 85% of all adults have rubella antibody titers. The disease occurs in two fashions – there is an endemic level of sporadic cases with minor epidemics occurring about every seven years and major epidemics less often. The 1964 epidemic in the State of Maine resulted in approximately seven times the usual annual occurrence. In 1941, it was recognized that when the rubella virus infected pregnant women, it was capable of producing congenital abnormalities in the fetus. Since that time, attention has been focused on the development of a suitable vaccine with which to prevent the occurrence of these crippling deformities. The seriousness of this syndrome is evident from a study done by the U. S. Public Health Service which estimated the economic cost of the 1964 epidemic to be approximately 1½ billion dollars. This cost resulted primarily from the production of retarded and defective children who require a great deal of care as well as representing a loss from the working population and secondarily from the direct effects of the disease.

In June, the FDA licensed a live rubella virus vaccine which is being produced by Merck, Sharp, and Dohme. Shortly, Dow Pharmaceuticals, Philip Roxane, and Smith, Kline, and French are expected to have available licensed live rubella virus vaccine. This winter the Division of Communicable Disease Control of the State Department of Health and Welfare will embark on a vaccination campaign designed to eradicate rubella in the state of Maine, thus preventing any future occurrences of the congenital rubella syndrome. This campaign will utilize several avenues of approach to the problem of eradicating rubella.

First, the U. S. Public Health Service will supply the state with a supply of vaccine adequate to immunize pre-school children who belong to certain underprivileged groups and who can be immunized through established programs such as Model Cities, Head Start, and the like.

Secondly, the Department of Health and Welfare will provide vaccine for the immunization of school children five through eleven years of age. This will be carried out through a series of mass clinics across the state which will be held in the winter months.

Thirdly, the private medical community will be depended upon to immunize those pre-school children who do not belong to the categories mentioned previously. Private physicians can obtain the vaccines from commercial sources and can administer it to their patients.

Fourthly, since the congenital rubella syndrome results from infection of women during pregnancy, an effort will be made to immunize women of childbearing age who have not previously been exposed to the disease. It is expected that the vast majority of immunizations of women in this group will be performed by the private medical community.

Because the vaccine is a live, attenuated virus, certain precautions must be carried out to ensure that there is no possibility of the vaccine strain of the virus causing fetal abnormalities. At the present time, there is no evidence that the vaccine strain is capable of doing this but, of course, no one wishes to answer this question by experience. Therefore, the Division of Communicable Disease Control of the Department of Health and Welfare has devised a plan which should minimize the danger.

The State Public Health Laboratory has currently available a hemagglutination inhibition antibody test to determine whether or not a person has been exposed to rubella in the past. This test will shortly be automated so that large numbers of sera can be processed. The test will be available free to all women in the state of childbearing age. When a woman appears at a physician's office and requests rubella vaccine, the Division of Communicable Disease Control recommends that the physician carry out the following steps:

1. Obtain a sample of serum and send it to the State Laboratory for the HAI titer.
2. If the patient has a positive titer, she is immune and does not require the vaccine.
3. If she has a negative titer, 1:10 or less, she is a candidate for vaccination.
4. Pregnant women should not receive the vaccine, as the possibility of the virus strain causing fetal abnormalities is unknown. Therefore, it is recommended that a pregnancy test be carried out on women in whom current pregnancy is a possibility.
5. Since pregnancy should be avoided for a period of two months after vaccination, the patient must be able to employ a medically acceptable means of contraception. It is the responsibility of the physician administering the vaccine to satisfy himself that the patient understands the hazard of becoming pregnant and is capable of employing satisfactory contraceptive techniques.
6. When these prerequisites have been met, then the vaccine can be administered to the women of childbearing age.

Continued on Page 268

*Division of Communicable Disease Control, State of Maine Department of Health and Welfare.

X-Ray Of The Month*

The patient is a 19-year-old boy with a long history of chronic glomerulonephritis.

Renal Osteodystrophy

Renal osteodystrophy may be defined as the skeletal changes secondary to chronic renal (glomerular or tubular) disease. The bony changes may be separated into two distinct groups: (1) secondary hyperparathyroidism and, (2) renal rickets or osteomalacia. It takes two to five years of renal dysfunction before renal osteodystrophy occurs. The pathological bone changes include: (1) rickets, (2) osteomalacia, (3) growth arrest lines, (4) mottling defects and subsequent metaphyseal abnormalities, (5) bony dissolution or generalized demineralization, (6) fibrous and cystic replacement of bone, (7) hyperactive lamellar or woven bone, (8) osteosclerosis, (9) proliferation of periosteal bone, and (10) osteoporosis. The roentgenographic features are not different from those in osteomalacia and hyperparathyroidism of other causes.

The roentgenographic features of renal osteodystrophy occur in three forms: (1) rickets (children) or osteomalacia (adult); (2) secondary hyperparathyroidism, and (3) osteosclerosis. There is deossification and cupping of metaphysis in young children; in older children there is a wide epiphyseal line. There is atrophy of secondary trabeculae with the remaining primary trabeculae



Fig. 1



Fig. 2

increased in density and width. This may account for the osteosclerosis. Secondary hyperparathyroidism is manifested by deossification and early subperiosteal bone reabsorption on the radial side of the middle phalanges; soft tissue calcifications and osteosclerosis are also common features of renal osteodystrophy.

This patient presented all the changes of renal osteodystrophy. Note the subperiosteal bone reabsorption involving the radial margins of the digits. The patient also shows reabsorption of the distal tufts which is a more severe change. There is calcification of the vessels, coarsening of the trabecular pattern, subperiosteal bone reabsorption occurring at tendinous insertions, and there is lysis of the distal clavicle.

* From the Department of Radiology, Maine Medical Center, Portland, Maine 04102.

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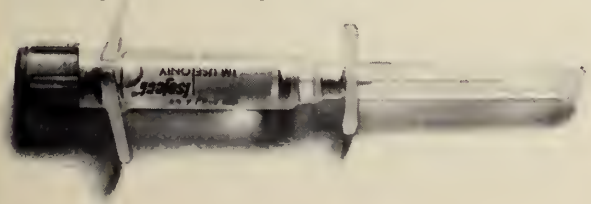
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The deltoid area should be used only if well developed such as in certain adults and older children, and then only with caution to avoid radial nerve injury. Intramuscular injections should not be made into the lower and mid-thirds of the upper arm. As with all intramuscular injections, aspiration is necessary to help avoid inadvertent injection into a blood vessel.
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By helping to remove dead tissue and debris from the ulcer's surface, ELASE Ointment creates a better environment for the elimination of infection, for healthy granulation... *for healing.* Its lytic enzymes effectively break down DNA in dead leukocytes and other debris... the fibrin in blood clots, serum, and purulent exudates... and the denatured proteins in necrotic tissue. Protein elements of *living* tissue are relatively unaffected. ELASE Ointment is indicated in stasis ulcers and in other infected or inflamed ulcers caused by circulatory disturbances. In cases requiring skin grafting, it is used preoperatively for debridement. For ambulatory patients debridement with ELASE Ointment is a convenient therapy and a regimen likely to be followed. *Precautions:* Observe usual precautions against allergic reactions, particularly in persons with a history of sensitivity to materials of bovine origin or to mercury compounds. *Adverse Reactions:* Side effects attributable to the enzymes have not been a problem at the dose and for the indications recommended. *Discussion:* Successful use of enzymatic debridement depends on several factors: (1) dense, dry eschar, if present, should be removed surgically before enzymatic debridement is attempted; (2) the enzyme must be in constant contact with the substrate; (3) accumulated necrotic debris must be periodically removed; (4) the enzyme must be replenished at least once daily; and (5) secondary closure or skin grafting must be employed as soon as possible after optimal debridement has been attained. It is further essential that wound-dressing techniques be performed carefully under aseptic conditions and that appropriate systemically acting antibiotics be administered concomitantly if, in the opinion of the physician, they are indicated. *Available:* ELASE Ointment is supplied in 30-Gm. tubes containing 30 units (Loomis) of fibrinolysin and 20,000 units of desoxyribonuclease with 0.12 mg. thimerosal (mercury derivative); and in 10-Gm. tubes containing 10 units of fibrinolysin and 6,666 units of desoxyribonuclease with 0.04 mg. thimerosal. ELASE Ointment has a special base of liquid petrolatum and polyethylene; contains sodium chloride and sucrose used during manufacture; is stable at room temperature through the expiration date stated on the package.

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County Society Notes

KENNEBEC

The Kennebec County Medical Association met on September 18, 1969 at The Silent Woman Restaurant in Waterville, Maine. Following a social hour and dinner, the meeting was called to order by the President, Joseph R. Crawford, M.D.

The evening scientific program was given by Benedict J. Duffy, Jr., M.D., Professor of Preventive Medicine, Tufts University School of Medicine. Dr. Duffy's subject was Community Medicine – A Two-Way System. Dr. Duffy described the organization of voluntary programs which supply medical care to economically distressed areas such as Columbia Point, Boston, similar areas in Mississippi, and Columbia, South America. Dr. Duffy gave a thought provoking discussion including the effects of the attitudes of the public involved; the medical profession and particularly of modern day medical students, upon the success of these projects.

Following a stimulating question and answer period, the meeting was adjourned.

FRANCIS A. SPELLMAN, M.D., *Secretary*

CUMBERLAND

A meeting of the Cumberland County Medical Society was held at the Purpoodock Club in Cape Elizabeth, Maine on September 18, 1969. The affair was the first of a planned series of annual outings and consisted of golf with appropriate prizes, softball between House Officers and the regular Staff members, a marvelous dinner, and a brief business meeting.

At the business meeting, it was moved and seconded that Drs. John Libby and Winifred Curtis be accepted into membership of the Society.

It was voted by the Society that the dues be increased from $20.00 to $25.00 per year.

Dr. Robert Ficker of Kennebunkport was greeted as a visiting member and as our District Representative from the M.M.A.

DOUGLAS R. HILL, M.D., *Secretary*

LINCOLN-SAGADAHOC

The Lincoln-Sagadahoc County Medical Society met at The Ledges in Wiscasset, Maine on September 16, 1969.

The application for membership of Peter Evans, M.D. was circulated and approved unanimously by the assembled members, as recommended by the Board of Censors.

Frank O. Avantaggio, Jr., M.D. was appointed Chairman of the Committee on Diabetes.

A letter from the Maine Medical Association requesting the Maine Medical Education Foundation assessments from all members who have not yet sent them in was read.

The status of those in special memberships was reviewed.

The meeting was then turned over to James O. Smith, M.D. who introduced a film on uses of inhaled acetylcysteine. A discussion was then led by Mr. Frank Baker, inhalation therapist at Thayer Hospital in Waterville.

GEORGE W. BOSTWICK, M.D., *Secretary*

STATEMENT OF OWNERSHIP, MANAGEMENT AND CIRCULATION

(Act of October 23, 1962; Section 4369, Title 39, United States Code)

1. Date of filing: October 1, 1969.
2. Title of publication: The Journal of the Maine Medical Association.
3. Frequency of issue: Monthly.
4. Location of known office of publication: Bowdoin College Infirmary (P.O. Box 250), Brunswick, Maine 04011.
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6. Names and addresses of publisher, editor, and managing editor: Publisher, Maine Medical Association, P.O. Box 250, Brunswick, Maine 04011; Editor, Daniel F. Hanley, M.D., P.O. Box 250, Brunswick, Maine 04011; Managing Editor, None.
7. OWNER (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding 1 percent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a partnership or other unincorporated firm, its name and address, as well as that of each individual must be given.)
Maine Medical Association, P.O. Box 250, Brunswick, Maine 04011.
8. Known bondholders, mortgagees, and other security holders owning or holding 1 percent or more of total amount of bonds, mortgages or other securities (If there are none, so state): None.
9. For completion by nonprofit organizations authorized to mail at special rates (Section 132.122, Postal Manual): The purpose, function, and nonprofit status of this organization and the exempt status for Federal income tax purposes:

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A. Total No. Copies Printed (Net Press Run)	1367	1388
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1. Sales through dealers and carriers, street vendors and counter sales	—	—
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C. Total Paid Circulation	82	86
D. Free Distribution (including samples) by mail, carrier or other means	1270	1282
E. Total Distribution (Sum of C and D)	1352	1368
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UNIFORM CODE OF MEDICAL QUALIFICATIONS FOR PARTICIPANTS IN INTERSCHOLASTIC ATHLETICS IN MAINE — *Continued from Page 254*

4. "Recommended Standards and Practices for a College Health Program" – 1964 – American College Health Association.
5. "Guide for Interscholastic Athletic Disqualification" – January 18, 1968 – Wisconsin Interscholastic Athletic Association.
6. Medical history and physical examination record forms; student participation, parental consent form – National Federation of State High School Athletic Associations.
7. "Desirable Athletic Competition for Children of Elementary School Age" – 1968 – American Association of Health, Physical Education and Recreation – Washington, D.C.
8. "Minimum Standards of Physical Fitness Required of Candidates for Collision Sports at the University of Maine," J. D. Clement, Jr., M.D., et al – The Journal of the Maine Medical Association, 58:121 (June 1967).
9. "Accident Prevention Research in Sports," Kenneth S. Clarke, Ph.D. – Journ. AAHPER, Vol. 40: No. 2, p. 45 (February 1969).
10. "The High School Team Physician" – Robert E. Reibeld, M.D. – Proc. 7th National Conf. Med. Aspects of Sports (AMA-1965) – pg. 50.
11. "Philosophy and Standards for Girls' and Women's Sports" – DGWS-AAHPER – Washington, D.C. – 1969.

SPECIAL ARTICLE – MAINE STATE RUBELLA VACCINATION PROGRAM — *Continued from Page 263*

The results of this program are expected to be twofold. First, immunization of susceptible women of childbearing age will result in immediate disappearance of congenital rubella syndrome. Secondly, immunization of children will prevent the further transmission of the disease both in its endemic and its epidemic forms since the disease depends upon this population of susceptible young children for its continued existence. Thus, in this multifold campaign, the State Department of Health and Welfare anticipates that rubella and its most severe consequence, the congenital rubella syndrome, will be eradicated from the State of Maine.

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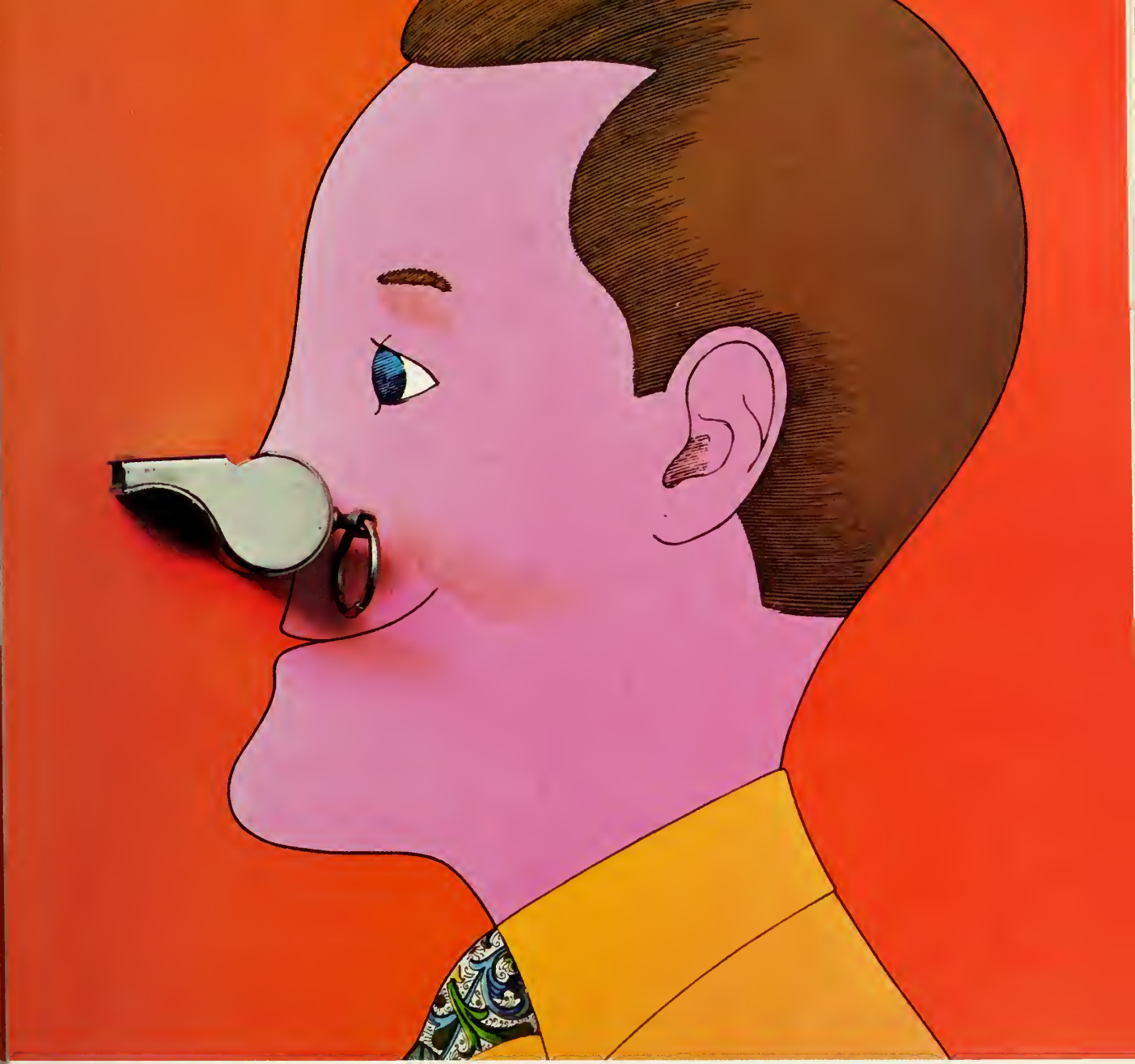
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UP TO 12 HOURS CLEAR BREATHING ON ONE TABLET

Indications: Dimetapp is indicated for symptomatic relief of the allergic manifestations of respiratory illnesses, such as the common cold and bronchial asthma, seasonal allergies, sinusitis, rhinitis, conjunctivitis, and otitis.
Contraindications: Hypersensitivity to antihistamines. Not recommended for use during pregnancy.
Precautions: Until patient's response has been determined, he should be cautioned against engaging in operations requiring alertness. Administer with care to patients with cardiac or peripheral vascular diseases or hypertension.
Side Effects: Hypersensitivity reactions including skin rashes, urticaria, hypotension and thrombocytopenia, have been reported on rare occasions. Drowsiness, lassitude, nausea, giddiness, dryness of the mouth, mydriasis, increased irritability or excitement may be encountered.
Dosage: 1 Extentab morning and evening.
Supplied: Bottles of 100 and 500.

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RICHMOND, VA. 23220

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Owner Breaks Arm When Yacht Runs Aground

Schuyler, Oct. 31. Harry Waters of Covesville incurred a fractured arm [illegible] yacht [illegible] ck a large rock tially capsized. The fire department had to rescue Waters by small boat. Damage to the yacht is estimated at [illegible].

Hasn't the skipper had enough excitement for one day?

For the patient who has been through an accident, the worry and anxiety following the mishap may actually heighten the perception of pain. This is why there's a classic ¼ grain *sedative* dose of phenobarbital in Phenaphen with Codeine—to take the nervous "edge" off, so the rest of the formula can control the pain more effectively.

A.H. Robins Company, Richmond, Va. 23220 A·H·ROBINS

Phenaphen® with Codeine

Phenaphen with Codeine Nos. 2, 3, or 4 contains: Phenobarbital (¼ gr.), 16.2 mg. (warning: may be habit forming); Aspirin (2½ gr.), 162.0 mg.; Phenacetin (3 gr.), 194.0 mg.; Hyoscyamine sulfate, 0.031 mg.; Codeine Phosphate, ¼ gr. (No. 2), ½ gr. (No. 3), or 1 gr. (No. 4) (warning: may be habit forming).

The compound analgesic that calms instead of caffeinates

Indications: Phenaphen with Codeine provides relief in severer grades of pain, on low codeine dosage, with minimal possibility of side effects. Its use frequently makes unnecessary the use of addicting narcotics. **Contraindications:** Hypersensitivity to any of the components. **Precautions:** As with all phenacetin-containing products excessive or prolonged use should be avoided. **Side effects:** Side effects are uncommon, although nausea, constipation and drowsiness may occur. **Dosage:** Phenaphen No. 2 and No. 3—1 or 2 capsules every 3 to 4 hours as needed; Phenaphen No. 4—1 capsule every 3 to 4 hours as needed. For further details see product literature.



One of these disposables comes prefilled.
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Dulcolax works so effectively that the time of bowel evacuation can often be predicted.

Dulcolax tablets taken at night will usually result in a convenient bowel movement the following morning. Dulcolax suppositories generally work within 15 minutes to an hour.

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FOR MODERATE TO SEVERE ANXIETY WITH COEXISTING DEPRESSION

TRIAVIL®

TRANQUILIZER-ANTIDEPRESSANT

Containing perphenazine and amitriptyline HCl

For prescribing information, including indications, contraindications, warnings, precautions, and side effects, please see following page.



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TRIAVIL®2-25: Each tablet contains 2 mg. of perphenazine and 25 mg. of amitriptyline hydrochloride.

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TRIAVIL®2-10: Each tablet contains 2 mg. of perphenazine and 10 mg. of amitriptyline hydrochloride.

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INDICATIONS: Patients with moderate to severe anxiety and/or agitation and depressed mood; patients with depression in whom anxiety and/or agitation are severe; patients with depression and anxiety in association with chronic physical disease; schizophrenics with associated depressive symptoms.

CONTRAINDICATIONS: Central nervous system depression from drugs (barbiturates, alcohol, narcotics, analgesics, antihistamines); bone marrow depression; urinary retention; pregnancy; glaucoma. Do not give in combination with MAOI drugs because of possible potentiation that may even cause death. Allow at least 2 weeks between therapies. In such patients therapy with TRIAVIL should be initiated cautiously, with gradual increase in the dosage required to obtain a satisfactory response.

WARNINGS: Patients should be warned against driving a car or operating machinery or apparatus requiring alert attention, and that response to alcohol may be potentiated.

PRECAUTIONS: Suicide is always a possibility in mental depression and may remain until significant remission occurs. Supervise patients closely in case they may require hospitalization or concomitant electroshock therapy. Untoward reactions have been reported after the combined use of antidepressant agents having various modes of activity. Accordingly, consider possibility of potentiation in combined use of antidepressants. Not recommended for use in children. Mania or hypomania may be precipitated in manic-depressives (perphenazine in TRIAVIL seems to reduce likelihood of this effect). If hypotension develops, epinephrine should not be employed,as its action is blocked and partially reversed by perphenazine. Caution patients about errors of judgment due to change in mood.

SIDE EFFECTS: Similar to those reported with either constituent alone.

Perphenazine: Should not be used indiscriminately. Use caution in patients with history of convulsive disorders or severe reactions to other phenothiazines. Likelihood of untoward actions greater with high doses. Closely supervise with any dosage. Side effects may be any of those reported with phenothiazine drugs: blood dyscrasias (pancytopenia, thrombocytopenic purpura, leukopenia, agranulocytosis, eosinophilia); liver damage (jaundice, biliary stasis); extrapyramidal symptoms (opisthotonos, oculogyric crisis, hyperreflexia, dystonia, akathisia, dyskinesia, parkinsonism) usually controlled by the concomitant use of effective antiparkinsonian drugs and/or by reduction in dosage, but sometimes persist after discontinuation of the phenothiazine; severe acute hypotension (of particular concern in patients with mitral insufficiency or pheochromocytoma); skin disorders (photosensitivity, itching, erythema, urticaria, eczema, up to exfoliative dermatitis); other allergic reactions (asthma, laryngeal edema, angioneurotic edema, anaphylactoid reactions); peripheral edema; reversed epinephrine effect; endocrine disturbances (lactation, galactorrhea, disturbances of menstrual cycle); grand mal convulsions; cerebral edema; altered cerebrospinal fluid proteins; polyphagia; paradoxical excitement; photophobia; skin pigmentation; failure of ejaculation; EKG abnormalities (quinidine-like effect); reactivation of psychotic processes; catatonic-like states; autonomic reactions such as dryness of the mouth, headache, nausea, vomiting, constipation, obstipation, urinary frequency, blurred vision, nasal congestion, and a change in the pulse rate; hypnotic effects; pigmentary retinopathy; corneal and lenticular pigmentation; occasional lassitude; muscle weakness; mild insomnia; significant unexplained rise in body temperature may suggest intolerance to perphenazine, in which case discontinue. Antiemetic effect may obscure signs of toxicity due to overdosage of other drugs or make diagnosis of other disorders such as brain tumors or intestinal obstruction difficult. May potentiate central nervous system depressants (opiates, analgesics, antihistamines, barbiturates, alcohol), atropine, heat, and phosphorous insecticides.

Amitriptyline: Careful observation of all patients recommended. Side effects include drowsiness (may occur within the first few days of therapy); dizziness; nausea; excitement; hypotension; fainting; fine tremor; jitteriness; weakness; headache; heartburn; anorexia; increased perspiration; incoordination; allergic-type reactions manifested by skin rash, swelling of face and tongue, itching; numbness and tingling of limbs, including peripheral neuropathy; activation of latent schizophrenia (however, the perphenazine content may prevent this reaction in some cases); epileptiform seizures in chronic schizophrenics; temporary confusion, disturbed concentration, or transient visual hallucinations on high doses; evidence of anticholinergic activity, such as tachycardia, dryness of mouth, blurring of vision, urinary retention, constipation, paralytic ileus; agranulocytosis; jaundice. The antidepressant activity may be evident within 3 or 4 days or may take as long as 30 days to develop adequately, and lack of response sometimes occurs. Response to medication will vary according to severity as well as type of depression present. Elderly patients and adolescents can often be managed on lower dosage levels.

For more detailed information consult your Merck Sharp and Dohme representative or see the package circular.

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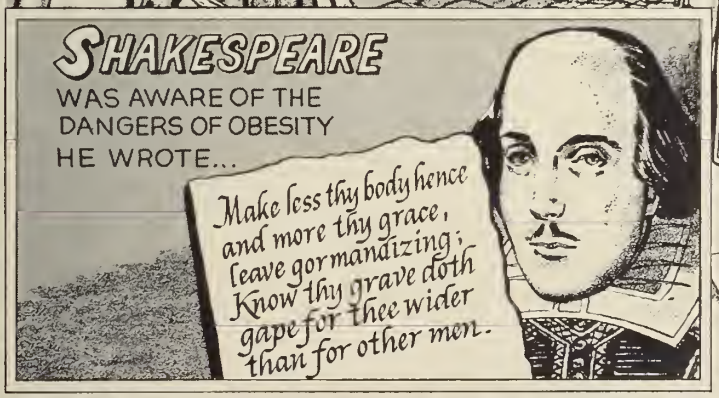
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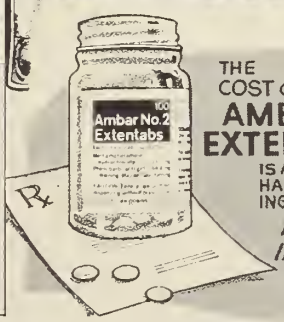
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methamphetamine HCl 15 mg., phenobarbital 64.8 mg. (1 gr.)
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One Ambar Extentab before breakfast can help control most patients' appetite for up to 12 hours. Methamphetamine, the appetite suppressant, gently elevates mood and helps overcome dieting frustrations. Phenobarbital, the sedative in Ambar, controls irritability and anxiety...helps maintain a state of mental calm and equanimity. Both work together to ease the tensions that erode the willpower during periods of dieting.

Also available: Ambar #1 Extentabs®—methamphetamine hydrochloride 10 mg., phenobarbital 64.8 mg. (1 gr.) (Warning: may be habit forming).

BRIEF SUMMARY/**Indications:** Ambar suppresses appetite and helps offset emotional reactions to dieting. **Contraindications:** Hypersensitivity to barbiturates or sympathomimetics; patients with advanced renal or hepatic disease. **Precautions:** Administer with caution in the presence of cardiovascular disease or hypertension. **Side Effects:** Nervousness or excitement occasionally noted, but usually infrequent at recommended dosages. Slight drowsiness has been reported rarely. See package insert for further details.

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Each fluidounce contains: 80 mg. Benadryl® (diphenhydramine hydrochloride, Parke-Davis); 12 grains ammonium chloride; 5 grains sodium citrate; 2 grains chloroform; 1/10 grain menthol; and 5% alcohol.

An antitussive and expectorant for control of coughs due to colds or of allergic origin, BENYLIN EXPECTORANT is the leading cough preparation of its kind. BENYLIN EXPECTORANT tends to inhibit cough reflex... soothes irritated throat membranes. And its not-too-sweet, pleasant raspberry flavor makes BENYLIN EXPECTORANT easy to take.

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ADVERSE REACTIONS: Side reactions may affect the nervous, gastrointestinal, and cardiovascular systems. Drowsiness, dizziness, dryness of the mouth, nausea, nervousness, palpitation, and blurring of vision have been reported. Allergic reactions may occur.

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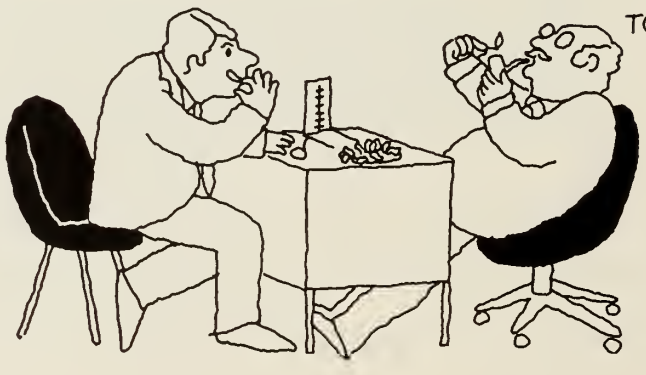
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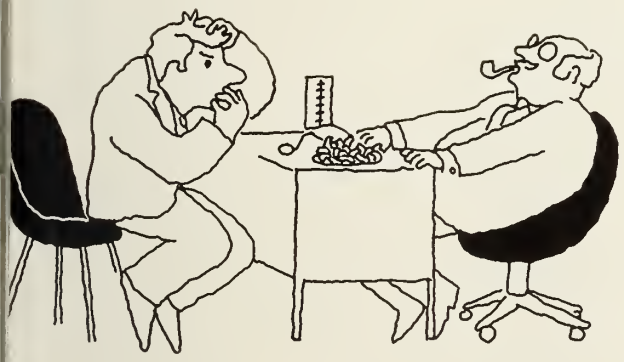




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chlorthalidone 50 mg.
reserpine U.S.P. 0.25 mg.

Regroton®: chlorthalidone 50 mg., reserpine U.S.P. 0.25 mg.
Indications: Hypertension. *Contraindications:* History of mental depression, hypersensitivity, and most cases of severe renal or hepatic diseases. *Warning:* With the administration of enteric-coated potassium supplements, which should be used only when adequate dietary supplementation is not practical, the possibility of small-bowel lesions (obstruction, hemorrhage, and perforation) should be kept in mind. Surgery for these lesions has frequently been required and deaths have occurred. Discontinue coated potassium-containing formulations immediately if abdominal pain, distention, nausea, vomiting, or gastrointestinal bleeding occur. Discontinue one week before electroshock therapy, and if depression or peptic ulcer occurs. *Use in pregnancy:* Because chlorthalidone may cross the placental barrier and appear in cord blood and thiazides may appear in breast milk, this drug should be used with care in pregnant patients and nursing mothers. When used in women of childbearing age, the potential benefits of the drug should be weighed against the possible hazards to the fetus. Use of chlorthalidone may result in fetal or neonatal jaundice, thrombocytopenia, and possibly other adverse reactions which have occurred in the adult. Increased respiratory secretions, nasal congestion, cyanosis and anorexia may occur in infants born to reserpine-treated mothers. *Precautions:* Antihypertensive therapy with this drug should always be initiated cautiously in postsympathectomy patients and in patients receiving ganglionic blocking agents, other potent antihypertensive drugs, or curare. Reduce dosage of concomitant antihypertensive agents by at least one-half. To avoid hypotension during surgery, discontinue therapy with this agent two weeks prior to elective surgical procedures. In emergency surgery use, if needed, anticholinergic or adrenergic drugs or other supportive measures as indicated. Because of the possibility of progression of renal damage, periodic kidney function tests are indicated. Discontinue if the BUN rises or liver dysfunction is aggravated. Hepatic coma may be precipitated. Electrolyte imbalance, sodium and/or potassium depletion may occur. If potassium depletion should occur during therapy the drug should be discontinued and potassium supplements given provided the patient does not have marked oliguria. Take particular care in cirrhosis or severe ischemic heart disease and in patients receiving





and allay anxiety in hypertension

orticosteroids, ACTH, or digitalis. Severe salt restriction is not recommended. Use cautiously in patients with ulcerative colitis or gallstones biliary colic may be precipitated). Bronchial asthma may occur in susceptible patients. *Adverse Reactions:* The drug is generally well tolerated. The most frequent side effects are nausea, gastric irritation, vomiting, diarrhea, constipation, muscle cramps, headache, dizziness and acute gout. Other potential side effects include angina pectoris, anxiety, depression, bradycardia and ectopic cardiac rhythms (especially when used with digitalis), drowsiness, dull sensorium, hyperglycemia and glycosuria, hyperuricemia, lassitude, restlessness, transient myopia, impotence or dysuria, orthostatic hypotension which may be potentiated when chlorthalidone is combined with alcohol, barbiturates or narcotics, leukopenia, aplastic anemia, skin rashes, thrombocytopenia, agranulocytosis, nasal stuffiness, increased gastric secretions, nightmare, purpura, urticaria, ecchymosis, weakness, uveitis, optic atrophy and glaucoma, and pruritus. Eruptions and/or flushing of the skin, a reversible paralysis agitans-like syndrome, blurred vision, conjunctival injection, increased susceptibility to colds, dyspnea, weight gain, decreased libido, dryness of the mouth, deafness, anorexia, and pancreatitis when epigastric pain or unexplained G.I. symptoms develop after prolonged administration. Jaundice, xanthopsia, paresthesia, photosensitization and necrotizing angiitis are possible. *Average Dosage:* One tablet daily with breakfast. *Availability:* Pink, single-scored tablets in bottles of 100 and 1000. (B)46-600-C

For details, please see complete prescribing information.

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chlorthalidone 50 mg.
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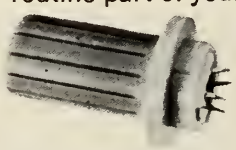
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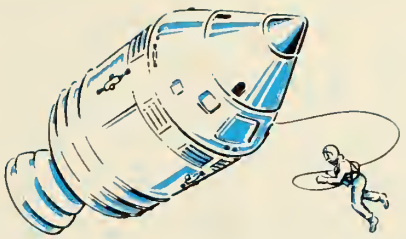
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250 mg. and 100 mg. capsules

Contraindications: Hypersensitivity to tetracyclines. *Warning:* In renal impairment, since liver toxicity is possible, lower doses are indicated; during prolonged therapy consider serum level determinations. Photodynamic reaction to sunlight may occur in hypersensitive persons. Photosensitive individuals should avoid exposure; discontinue treatment if skin discomfort occurs. *Precautions:* Nonsusceptible organisms may overgrow; treat superinfection appropriately. Tetracycline may form a stable calcium complex in bone-forming tissue and may cause dental staining during tooth development (last half of pregnancy, neonatal period, infancy, early childhood).

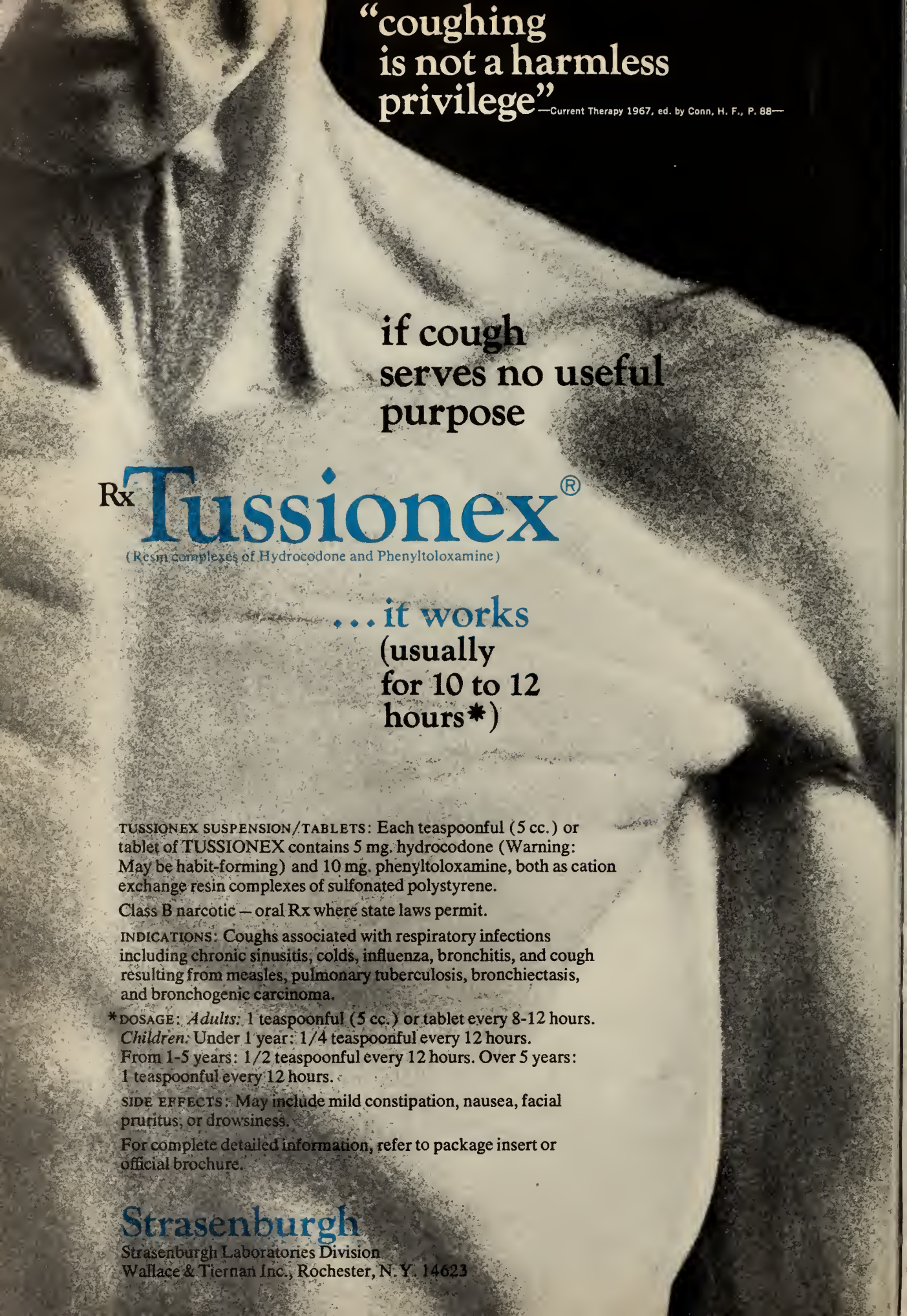
Side Effects: Gastrointestinal—anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis, pruritus ani. *Skin*—maculopapular and erythematous rashes; exfoliative dermatitis; photosensitivity; onycholysis, nail discoloration. *Kidney*—dose-related rise in BUN. *Hypersensitivity reactions*—urticaria, angioneurotic edema, anaphylaxis. *Intracranial*—bulging fontanels in young infants. *Teeth*—yellow-brown staining; enamel hypoplasia. *Blood*—anemia, thrombocytopenic purpura, neutropenia, eosinophilia. *Liver*—cholestasis at high dosage.

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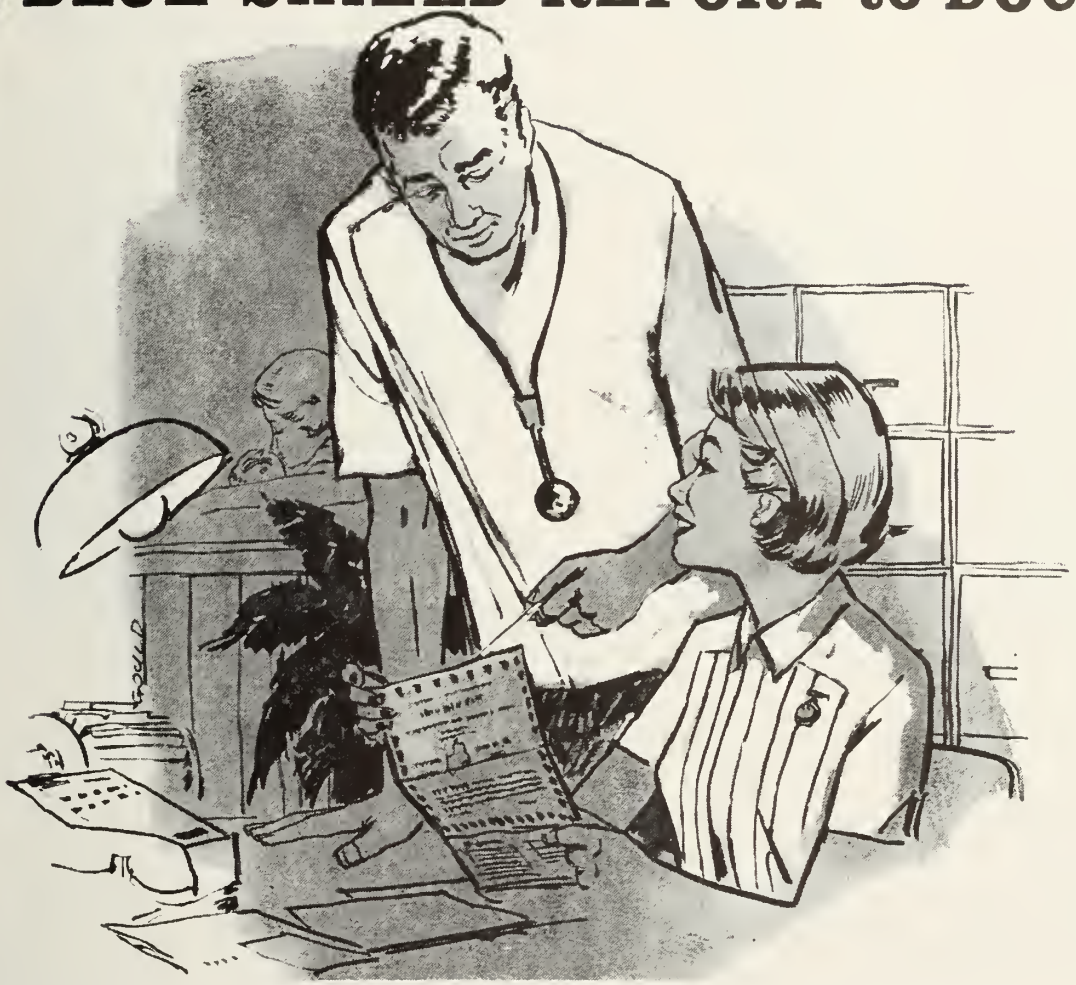
SIDE EFFECTS: May include mild constipation, nausea, facial pruritus, or drowsiness.

For complete detailed information, refer to package insert or official brochure.

Strasenburgh

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A BLUE SHIELD REPORT to DOCTORS



REPORT # 29

Q. What does Blue Shield cover other than on an in-patient basis?

A. Basically, surgical procedures listed in the Schedule of Fees and certain diagnostic procedures such as X-rays, EKG's, T-3 tests. Routine exams, flu shots, etc., are not covered.

Q. Would other than a covered procedure be paid for on an office basis?

A. Yes, for accident care only. If a physician is seen within 72 hours of a traumatic injury, an emergency accident care benefit is payable. Beyond this 72-hour period a covered procedure would have to be involved in order for a benefit to be paid.

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Before prescribing, pleose consult complete product informotion, o summory of which follows:

Indications: Indicoted when onxiety, tension ond opprehension ore significont components of the clinicol profile.

Contraindications: Patients with known hypersensitivity to the drug.

Warnings: Coution potients obout possible combined effects with olcohol ond other CNS depressonts. As with oll CNS-octing drugs, coution potients ogoinst hozordous occupotions requiring complete mentol olertness (e.g., operoting mochinery, driving). Though physicol ond psychologicol dependence hove rorely been reported on recommended doses, use coution in odministering to oddiction-prone individuols or those who might increase dosoge; withdrowol symptoms (including convulsions), following discontinuotion of the drug ond similor to those seen with borbiturotes, hove been reported. Use of ony drug in pregnoncy, lactotion, or in women of childbeoring oge requires thot its potentiol benefits be weighed ogoinst its possible hozords.

Precautions: In the elderly ond debilitoted, ond in children over six, limit to smollest effective dosoge (initiolly 10 mg or less per day) to preclude otoxio or oversedation, increosing groduolly os needed ond tolerated. Not recommended in children under six. Though generolly not recommended, if combinotion theropy with other psychotropics seems indicoted, corefully consider individual phormocologic effects, porticulorly in use of potentioting drugs such os MAO inhibitors ond phenothiozines. Observe usuol precoutions in presence of impoired renol or hepotic function. Porodoxicol reoctions (e.g., excitement, stimulotion ond acute rage) hove been reported in psychiotric potients ond hyperoctive oggressive children. Employ usuol precautions in treotment of onxiety stotes with evidence of impending depression; suicidol tendencies moy be present ond protective measures necessory. Vorioble effects on blood coogulotion have been reported very rorely in potients receiving the drug ond orol onticoogulonts; cousol relotionship hos not been estoblished clinicolly.

Adverse Reactions: Drowsiness, otoxio ond confusion moy occur, especially in the elderly ond debilitoted. These ore reversible in most instonces by proper dosoge odjustment, but ore olso occosionolly observed ot the lower dosoge ronges. In o few instonces syncope hos been reported. Also encountered ore isoloted instonces of skin eruptions, edemo, minor menstruol irregulorities, nouseo ond constipotion, extropyromidol symptoms, increased ond decreosed libido—oll infrequent ond generolly controlled with dosoge reduction; chonges in EEG potterns (low-voltoge fost octivity) moy oppeor during ond ofter treotment; blood dyscrosios (including ogronulocytosis), joundice ond hepotic dysfunction hove been reported occosionolly, making periodic blood counts ond liver function tests odvisoble during protrocted theropy.

[redacted]
SHELVES

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THE JOURNAL

of

The Maine Medical Association

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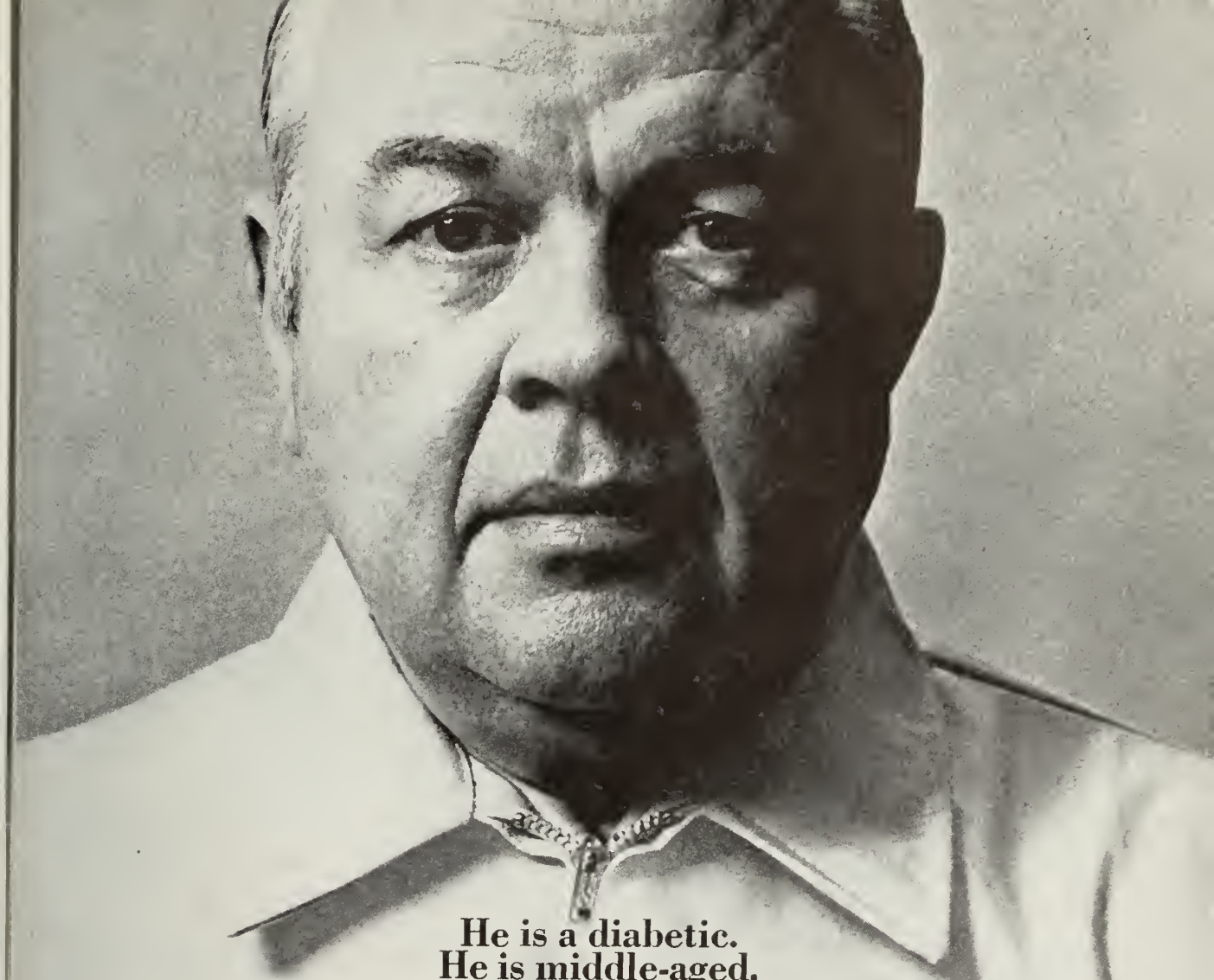
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Contraindication: History of hypersensitivity to demethylchlortetracycline or nystatin.

Warning: In renal impairment, usual doses may lead to excessive accumulation and liver toxicity. Under such conditions, lower than usual doses are indicated, and, if therapy is prolonged, serum level determinations may be advisable. A photodynamic reaction to natural or artificial sunlight has been observed. Small amounts of drug and short exposure may produce an exaggerated sunburn reaction which may range from erythema to severe skin manifestations. In a smaller proportion, photoallergic reactions have been reported. Patients should avoid direct exposure to sunlight and discontinue drug at the first evidence of skin discomfort. Necessary subsequent courses of treatment with tetracyclines should be carefully observed.

Precautions: Overgrowth of nonsusceptible organisms may occur. Constant observation is essential. If new infections appear, appropriate measures should be taken. In infants, increased intracranial pressure with bulging fontanels has been observed. All signs and symptoms have disappeared rapidly upon cessation of treatment.

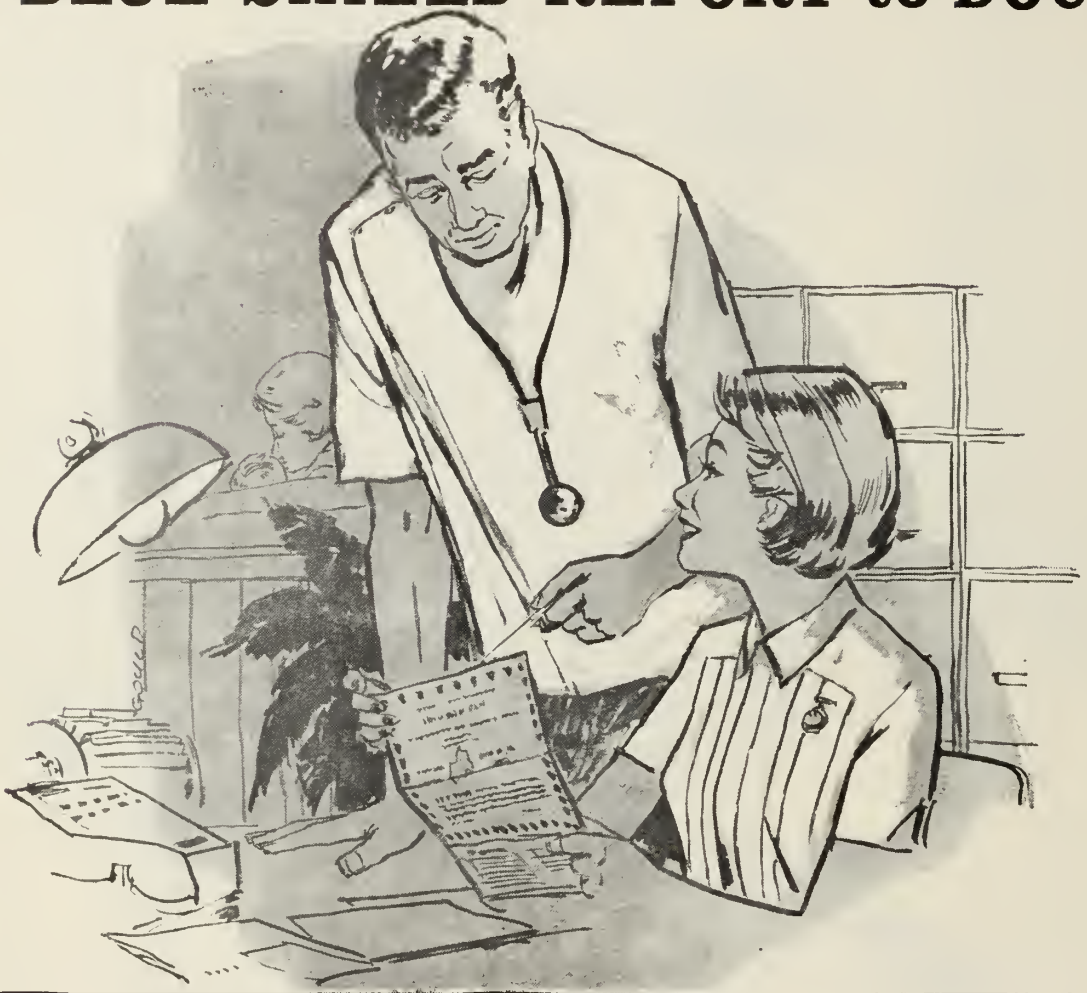
Side Effects: Gastrointestinal system—anorexia, nausea, vomiting, diarrhea, stomatitis, glossitis, enterocolitis, pruritus ani. Skin—maculopapular and erythematous rashes; a rare case of exfoliative dermatitis has been reported. Photosensitivity; onycholysis and discoloration of the nails (rare). Kidney—rise in BUN, apparently dose related. Transient increase in urinary output, sometimes accompanied by thirst (rare). Hypersensitivity reactions—urticaria, angioneurotic edema, anaphylaxis. Teeth—dental staining (yellow-brown) in children of mothers given this drug during the latter half of pregnancy, and in children given the drug during the neonatal period, infancy and early childhood. Enamel hypoplasia has been seen in a few children. If adverse reaction or idiosyncrasy occurs, discontinue medication and institute appropriate therapy. Demethylchlortetracycline may form a stable calcium complex in any bone-forming tissue with no serious harmful effects reported thus far in humans.

Average Adult Daily Dosage: 150 mg q.i.d. or 300 mg b.i.d. Should be given 1 hour before or 2 hours after meals, since absorption is impaired by the concomitant administration of high calcium content drugs, foods and some dairy products. Treatment of streptococcal infections should continue for 10 days, even though symptoms have subsided.

Lederle

LEDERLE LABORATORIES
A Division of American Cyanamid Company, Pearl River, New York

A BLUE SHIELD REPORT to DOCTORS



REPORT # 30

Q. Must the patient's age be shown on the Blue Shield claim form?

A. The "Service Benefit" provision which is ex- regrettably, be held up until this information has been received.

Q. What is the most misunderstood provision of the Blue Shield contract by both the subscriber and physician?

A. The "Service Benefit" provision which is explained in Article 11 of the subscriber's contract.

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ROCHE

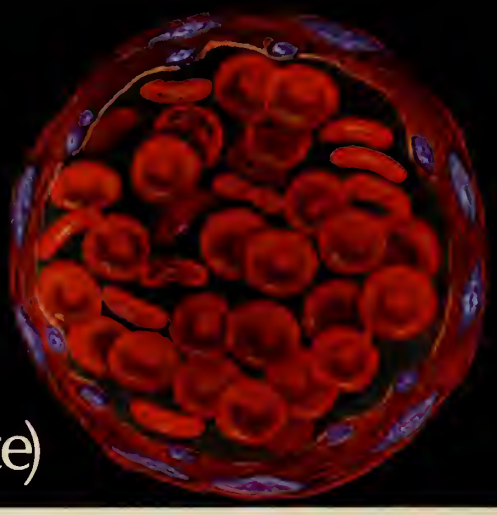
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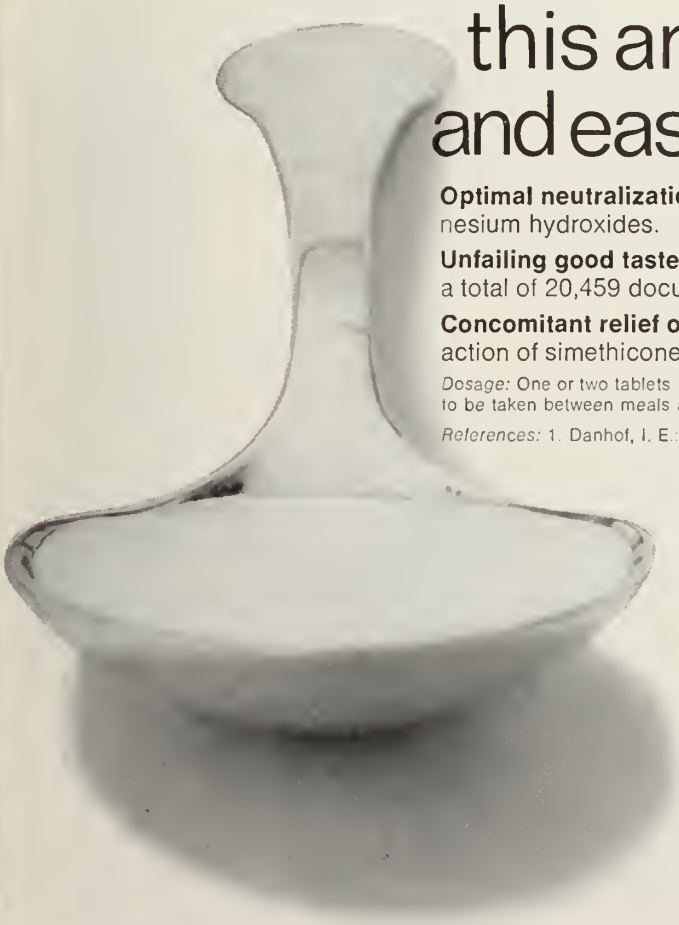
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References: 1. Danhof, I. E.: Report on file. 2. Hoon, J. R.: Arch. Surg. *93*:467 (Sept.) 1966.

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Volume Sixty | Brunswick, Maine, December, 1969 | Number 12

New Name and New Challenge in Eastern Maine

ROBERT H. BRANDOW, M.S., F.A.C.H.A.*

After over seventy years as the Eastern Maine General Hospital, our name has changed to Eastern Maine Medical Center as of October 1, 1969.

The name change merely recognizes the fact that the former Eastern Maine General Hospital increasingly serves a broad area outside of Bangor. It is an interesting fact that on March 3, 1897, the name of the hospital had changed from Bangor Hospital to Eastern Maine General Hospital in recognition of the trend already evident at that time.

The Medical Center is a referral and teaching center increasingly, because of the range of medical specialties represented on its Staff and its schools of nursing, anesthesia, x-ray technique, and medical laboratory technology.

The name change also recognizes the affiliation of other hospitals and health services with eastern Maine. For example, the Medical Center is wired by dataphone to thirteen area hospitals for transmission of electrocardiograms — and has similar regional ties for laboratory tests, pathology and other services.

Then, too, there is the fact that physician offices have been located on the same campus as the hospital and the likelihood that other health agencies will be quartered in the building or on the grounds as part of contemplated new construction programs.

The change of name was one of several suggestions included in the master development plan for the Eastern Maine Medical Center recommended by a firm of hospital consultants, which has studied the hospital's role in its six-county service region over the past two years. Their primary recommendation underlined the fact that the major task facing the new Medical Center is one of financing, planning, and constructing a replacement of about one-half of the present facilities, which have served eastern Maine so long and well. The decision to move ahead on the first phase of this construction plan was announced June 1, 1969, in the Bangor Daily News by the Board of Trustees.

My own appointment as executive director at the Medical Center has coincided with the decision on the building program but this does not mean the attention of the new administration will be focused merely on construction. In any developing medical center, there are too many operational challenges arising each day for this to be so. Administrative goals and attention at the Eastern Maine Medical Center will be about equally divided between:

1. *Quality of Patient Care*
2. *Cost-Effectiveness in Delivery of Patient Care*
   (which refers to insuring the patient that his dollar is necessarily and effectively spent)

It is our challenge at Eastern Maine Medical Center and throughout the health field to be RESPONSIVE on a higher plane than ever before — in quality of care, in hospital design, in associated utilization of related services, and in cost-effectiveness. RESPONSIVENESS to current needs of the patient/public is essential to continued and renewed support by the public in all hospitals, even one that has given so much of itself over so many years as has the former Bangor Hospital — Eastern Maine General Hospital — now Eastern Maine Medical Center.

*Executive Director, Eastern Maine Medical Center, Bangor, Maine 04401.

Leiomyosarcoma Of Testis And Small Bowel

Pierre M. LeNoac'h, M.D.*

The unusual occurrence of a leiomyosarcoma involving both the testis and the ileum furnished the stimulus for the following case report.

Case Report

A 60-year-old white farmer was first admitted to the Eastern Maine General Hospital on April 26, 1968 because of swelling and tenderness in the left testis. The patient, a native of Maine, had always lived in this state. He had had the usual childhood diseases, a fracture of the wrist at age 14, an appendicectomy at age 29 and a cholecystectomy, at age 60, in February 1968. Following the cholecystectomy, the patient first noted a swelling of his left testis which persisted. Shortly after he left the hospital, following the cholecystectomy, he experienced severe abdominal pain associated with vomiting. He was returned to the hospital where an exploratory laparotomy on March 21, 1968, revealed a tumor of the ileum, characteristic of a leiomyosarcoma. Following his cholecystectomy, the patient's appetite was poor and his weight dropped from 146 to 116 pounds. After the removal of the ileum, the patient's left testis became more swollen and tender. He also complained of discomfort in the left flank and in the left upper abdomen. He had no difficulty in voiding. On April 26, 1968, he was admitted to the Eastern Maine General Hospital for further study. Prior to February 1968, he smoked approximately 20 to 30 cigarettes a day; he stopped smoking in February 1968. He would take only an occasional social drink.

Physical examination (4-26-68) revealed an edentulous middle-aged man weighing 127 pounds, appearing neither acutely nor chronically ill. His pulse was 82/min; respirations 12/min; and blood pressure 130/80 mm.Hg. A single small hard shotty lymph node was palpable in his left axilla. His abdomen was soft and slightly distended. There were two recent and one remote well-healed abdominal incisional scars. Small shotty lymph nodes in the upper femoral canals were more conspicuous on the right. The penis and right testis were normal. The left testis was enlarged, hard and tender. The prostate was smooth, perhaps two times enlarged, and felt benign. The remainder of the physical examination was within normal limits.

Excretory urography, colonography, chest film and an electrocardiogram done on April 26 to April 27 were within normal limits. Urinalysis showed no abnormalities. Hemogram showed hematocrit 35%; hemoglobin 11.1 gms/100ml; Leukocytes 7,100/ mm^3; thrombocytes 408,000 per mm^3; and a normal differential count. A bone aspiration revealed an essentially normal differential count. No tumor involvement could be demonstrated. The marrow showed no stainable iron. The blood sedimentation rate (Cutler) was 28 mm/1 hour. Blood urea nitrogen (2 x) was 10 mg. and 15 mg. respectively. Blood dextrose 108 mg./100 ml. The acid phosphatase was not elevated.

On April 30, 1968, a left orchiectomy was performed. The spermatic cord was clamped, divided and ligated close to the internal ring. The bleeding was minimal. Aside from some postoperative discomfort, the patient's postoperative course was not remarkable.

The testicle, which had previously been incised, measured 6.5 x 5.0 x 4.5 cms. Within the testis was a fairly well-defined tumor mass measuring 5.3 x 3.9 x 3.5 cms. presenting a map-like, yellow-gray to brown-red appearance. The surrounding testicular parenchyma had the usual ochre-colored, soft appearance. The tunica albuginea was smooth and bluish-white. The epididymis and pampiniform plexus were normal in appearance. Microscopic examination revealed an extensive tumor composed of poorly differentiated elongated cells with tail-like processes. Scattered throughout the tumor were numerous mitotic figures and multiple areas of necrosis and hemorrhage. In some areas the tumor was well-vascularized and the vessels were quite uniformly surrounded by tumor cells. Occasional vessels appeared to be lined by tumor cells. A moderate number of polys were scattered in the areas of necrosis. Subjacent to the tunica albuginea were numerous atrophic seminiferous tubules. The interstitial spaces were edematous. Interstitial cells of Leydig were not identified. The vascular channels, striated muscle and the interstitial connective tissue in sections of the pampiniform plexus showed no histologic abnormalities. The ducts of the epididymis were lined by tall columnar epithelium. Their lumina contained secreted material but no spermatozoa. The diagnosis of leiomyosarcoma of the left testis was made. No tissue was received from the left axilla. The nodule could not be demonstrated at the time of surgery.

Slides were requested from the pathologist who had examined the tumor of the ileum removed in March 1968. Examination of those slides revealed an extensive tumor involving the mucosa, submucosa and muscularis of the ileum. The tumor was composed of elongated mesenchymal cells with moderately long tail-like processes. Numerous mitotic figures were scattered throughout the tumor tissue. There was slight edema of the supporting connective tissue stroma. There were scattered focal areas of hemorrhage in the tumor. Areas of necrosis were demonstrated in the mucosal epithelium of the ileum. Portions of the tumor suggested the architectural pattern of a tissue culture of smooth muscle cells. The diagnosis of leiomyosarcoma of the small bowel was made.

There was a marked similarity in the histologic appearance of the tumor of the ileum and that of the testis. Because of the relative frequency of primary leiomyosarcoma of the ileum and the rarity of primary leiomyosarcoma of the testis, it was initially assumed that this patient's primary tumor was in the ileum and had metastasized to the testis. This initiated an interest in reviewing the possible pathways of spread of such tumors. These pathways will be discussed later.

On April 20, 1968, the patient was again admitted to the Eastern Maine General Hospital complaining of increasing pain in his left leg. His left flank pain had decreased and his anorexia had improved. An x-ray of his left leg showed an area of bone destruction with probable associated pathological fracture of the left fibula. He was treated with combination therapy of radiation and actinomycin D. These treatments were continued on an outpatient basis with relief of the leg pain.

He was re-admitted on July 15, 1968 complaining of pain in the lumbo-sacral region. Since his previous admission, two palpable lymph nodes were recognized, one in the right inguinal region and one in the left anterior cervical region. The patient showed generalized weakness and had difficulty in getting around. His weight had dropped to 118 pounds. X-rays of the lumbar spine showed no evidence of metastatic disease in the pelvis or lumbo-sacral spine. A biopsy of the inguinal node was consistent with an anaplastic mesenchymal tumor. He was discharged to continue tumor therapy as an outpatient.

Testicular Tumors

A survey of the literature suggests that leiomyosarcomas

*Resident in Pathology, Eastern Maine Medical Center, Bangor, Maine 04401.

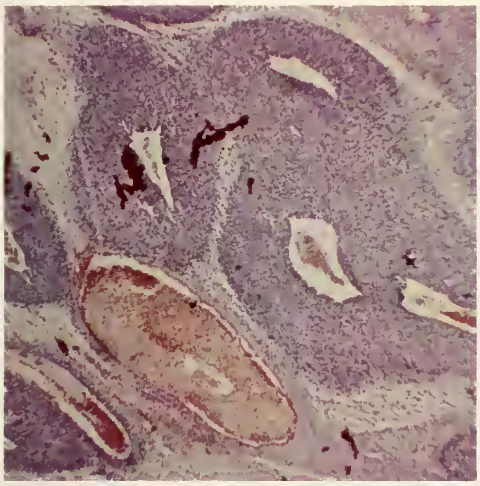


Fig. 1. Left testis. An area of the tumor showing arrangement of the tumor cells around vascular spaces filled, or partially filled, with blood. Between the masses of tumor cells there is a markedly edematous stroma (H and E x 21).

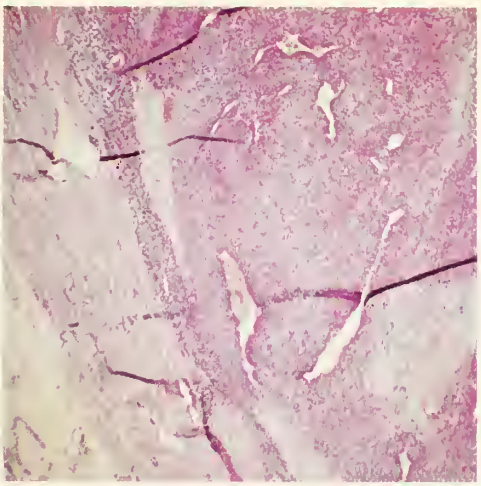


Fig. 2. Left testis. The testicular tissue adjacent to the tumor appears compressed with flattening of the injured or necrotic epithelium lining the seminiferous tubules (H and E x 21).

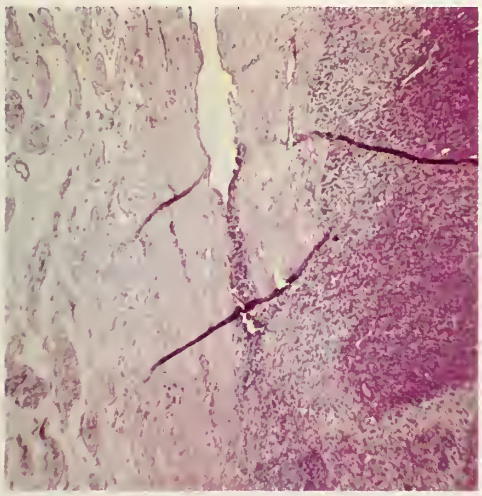


Fig. 3. Left testis. Relatively well preserved tubules which, on greater magnification, showed spermatogenesis to be arrested at the spermatid stage, occasionally showing an elongated nucleus with formation of acrosome and head cap, but no flagellum (H and E x 21).

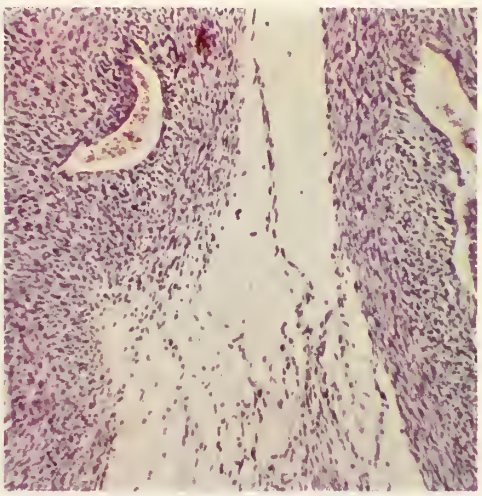


Fig. 4. Left testis. Tumor cells and their nuclei are predominantly elongated. Many rounded darker nuclei represent karyopyknosis; some represent cross-sections of elongated nuclei; others belong to undifferentiated, round tumor cells (H and E x 60).

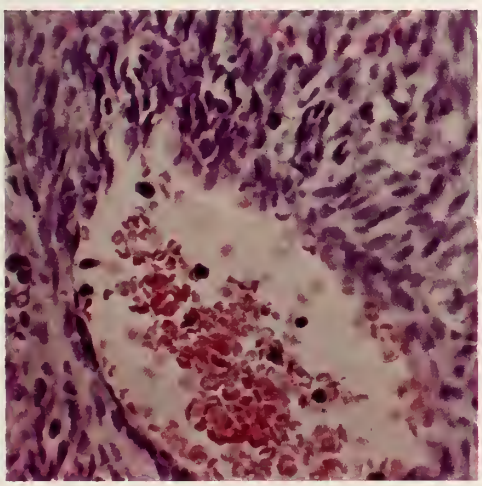


Fig. 5. Left testis. One of the vascular spaces is partially lined by plump tumor cells and partially lined by flattened cells which frequently seem to be flattened tumor cells rather than true endothelial cells (H and E x 258).

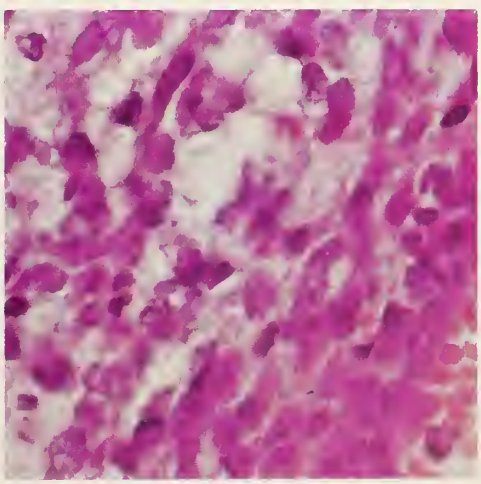


Fig. 6. Left testis. "Oil immersion" view of an area of tumor cells appearing more anaplastic and rounded especially near the vascular or pseudovascular spaces which they partially line (H and E x 582).

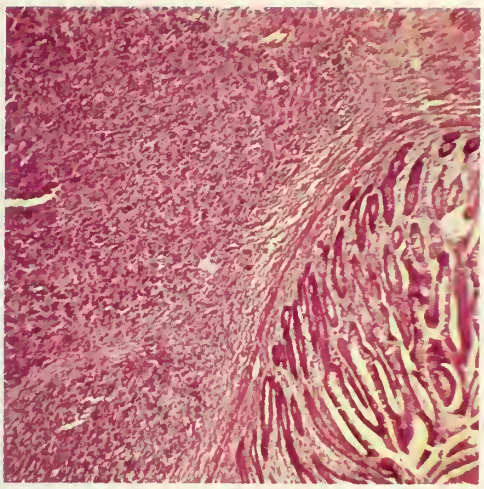


Fig. 7. Ileum. A "low power" view near the mucosal surface of the ileum. The tumor has replaced the submucosa and the innermost portion of the muscular coat, but in this area the muscularis mucosae and the mucosa have not yet been penetrated by the tumor cells. Other sections reveal invasion of the mucosa by tumor (H and E x 21).

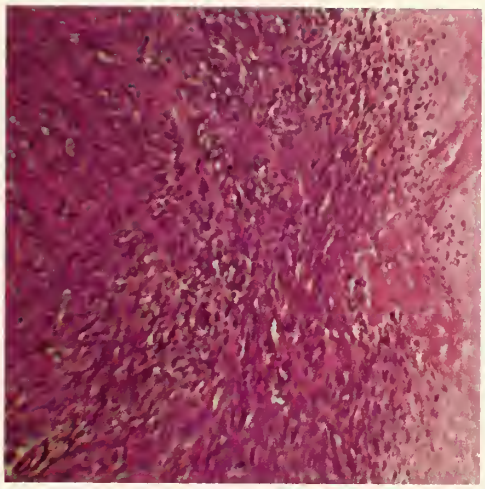


Fig. 8. Ileum. A "medium power" view near the serosal surface of the ileum showing replacement of the muscular coat by tumor cells. The serosa is not transgressed. The subserosa is edematous and shows hemorrhagic congestion with fibrin deposition. Note the elongated appearance of the tumor cells (H and E x 60).

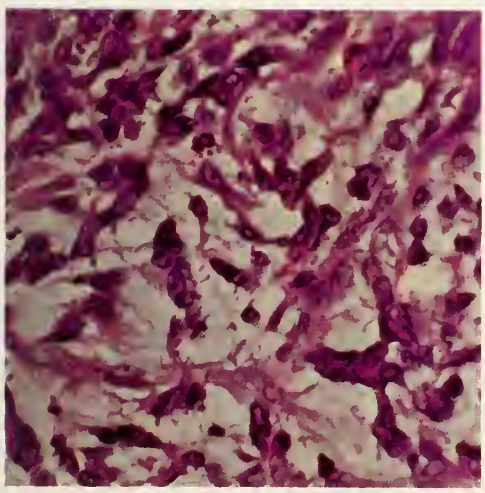


Fig. 9. Ileum. A "high-power" view of the tumor in the ileum demonstrating the tail-like cytoplasmic processes with their fine longitudinal fibrillar pattern. The pleomorphic nuclei are predominantly elongated and show hyperchromatism, irregular contours, thickened walls, unevenly distributed coarse chromatin and prominent nucleoli. The nuclei often show a fine vacuolization and are sometimes vesicular. An example of the frequent mitoses observed throughout the sections is seen at one edge of the section (H and E x 258).

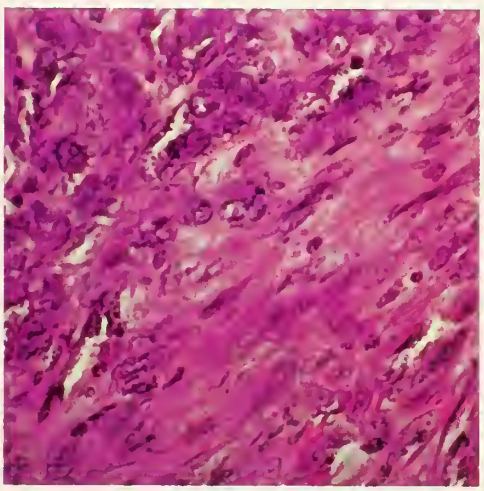


Fig. 10. Ileum. A "high-power" view of the tumor in the ileum showing the deeply eosinophilic, longitudinally striated, somewhat wavy, cytoplasmic processes of the tumor cells. The nuclei are variably elongated or rounded depending upon the degree of anaplasia of the tumor cells. The cytoplasm of the rounded cells is amphophilic or faintly basophilic. (H and E x 258).

of the testis, either primary or secondary, are rarely if ever seen. Although the New British Classification of Tumors of the Testis, Epididymis and Related Structures[4] published in 1965 includes the category of leiomyosarcoma, reference is made only to such tumors arising in the connective tissue and muscle of the epididymis and spermatic cord. To date we have been unable to find recorded a leiomyosarcoma of the testis.

Dixon and Moore[3] report that 96.5% of testicular tumors are of the germinal type and 3.5% arise from the non-germinal elements of the testis. They report that the rare non-germinal tumors are extremely varied and they include interstitial cell tumors, andreoblastomas, fibromas (usually from the tunica), fibrosarcomas, angiomas, neurofibromas, adenomatoid tumors (usually within the epididymis) and adenocarcinomas of the rete testis. Of all these tumors, only the interstitial cell tumors, andreoblastomas and rete carcinomas are specifically gonadal. The remaining varieties are similar to their counter parts originating elsewhere in the body. Other benign and malignant connective tissue tumors have been reported in the testis but they are probably not true non-germinal testicular tumors. The rhabdomyomas, rhabdomyosarcomas, chondromas and chondrosarcomas reported in the early literature probably represent one-sided developments of teratomas rather than pure primary tumors. The lymphomas reported in the testis are almost always associated with obvious generalized involvement.

There are a number of published cases of lymphosarcoma and of the less common reticulum sarcoma involving the testis which have presented clinically as testicular tumors and should therefore be considered in the differential diagnosis of testicular tumors.[5–9,22]

Three reports of myeloma of the testis[10–12] are infrequent examples of non-germinal tumors found in the testis.

Between 1903 and 1965, there have been reported eleven cases of "pure testicular rhabdomyosarcomas."[13,20] Most authors appear to believe that the origin is best explained as a malignant overgrowth of the mesodermal elements of a teratoma. According to Ravich et al,[13] the pure rhabdomyosarcoma of the testis indicates the complete overgrowth of all of the other elements by the rhabdomyoblasts. A similar explanation might be well entertained in our example of a leiomyosarcoma if one considered the testis as the site of the primary tumor. It could be explained as arising from leiomyoblasts arising from a pre-existing small teratoma, which had similarly overgrown the other components of the teratoma. The tumor of the ileum would then be explained as a metastasis from the mesodermal elements of an unrecognized teratoma. The spread of the tumor could be explained by the transport of tumor cells by way of lymphatic channels to the central group of the abdominal juxta-aortic lymph nodes and subsequent retrograde transport of tumor cells through the superior mesenteric lymphatic channels down to the ileum.

It is noted that the patient with a pure rhabdomyosarcoma, reported by Ravich et al,[13] died with intestinal obstruction associated with generalized metastases.

Although one is hesitant to draw conclusions from the comparison of the biological behavior of carcinomas and sarcomas, it was of interest to us to review the reports of carcinomas metastasizing to the testis. Such tumors are also relatively infrequent. In 1957, Price and Mostofi,[1] when reviewing 1600 cases of primary testicular tumors filed at the Armed Forces Institute of Pathology, found only 38 proven cases of metastatic testicular carcinomas. In their study of these 38 cases, the most frequent sites of origin were the lung and the prostate. Only in two patients was the colon the primary site. None were primary in the small intestine. Secondary foci were observed in at least one other organ in 30 of the 38 cases for which information was available. In the majority of cases, a generalized carcinomatosis was disclosed at autopsy. They noted that in only 6 cases was the testicular tumor recognized clinically, while it was found incidentally in the examination of testes removed for carcinoma of the prostate in 5 cases and was discovered only at autopsy in 27 cases. These authors also observed, in metastatic carcinoma of the testis, that the tumor cells are situated principally in the interstitium surrounding relatively intact seminiferous tubules. Another point of differentiation from primary carcinoma of the testis is that tumor emboli in the vascular channels of the parenchyma and tunica of the testis are unusual in primary testicular tumors other than embryonal carcinomas of infants. Such emboli were found in 47% of their metastatic tumors found in the testis.[1]

Among the metastatic testicular cancers arising in the gastro-intestinal tract, two have been reported as resembling the Krükenberg type. The tumor reported by London and Grossman[14] had its origin in the stomach; that of Hunter and Hutcheson[16] arose from the cecum. In 1955, Dockerty and Scheifley[18] reported a metastatic carcinoma of the testis in which the primary site was not definitely established even at autopsy, but the ileum was considered the probable origin. One unique case, reported by Bodon and Dressler,[17] is that of metastatic testicular carcinoma arising in the vermiform appendix. In explaining the pathway of metastatic spread, they report ". . . the carcinoma of the appendix formed metastases through two different routes." One was the extension of the tumor to the peritoneal cavity through serosal dissemination by the lymphatics or by implantation. The other was the metastasis to the right testicle through retrograde progression via the spermatic veins and spreading by the direct extension of the tumor into these veins. "Although the propagation of the tumor into the spermatic veins was not demonstrable under the microscope, the gross findings at operation were unmistakable."

Other interesting testicular tumors include two cases of reticulum sarcoma of the testis reported by Nalle and Gray,[6] three additional cases reported by Wojewski,[8] a

rare case of melanoma of the testis reported by Lowell and Lewis[21] and the cases of lymphoblastomas of the testis in children reviewed by Waddell.[19]

Possible Routes of Metastasis

In the case of the leiomyosarcoma, which we have presented, it is of interest to speculate the possible channels involved in the spread of the tumor. If one assumes that the primary tumor had its origin in the ileum, tumor emboli could be carried to the testis by any one of the several pathways depicted in four "Schemas" shown on this and the following pages.

Discussion

One should recall that, except for the severe abdominal pain of which the patient complained following his cholecystectomy, the primary clinical manifestation to be associated with the presence of malignant disease was swelling of the left testis, although approximately one month later an exploratory laparotomy disclosed a malignant tumor of the ileum. No extension to the liver or intraabdominal lymph nodes were noted at the time of the laparotomy.

Schema I

↓ Superior Mesenteric Vein

↓ Portal Vein

↓ Hepatic Vein

↓ Vena Cava Inferior

RETROGRADE

↓ Left, inferior epigastric vein

↓ Left, posterior* group of pampiniform venous plexus (= external spermatic veins, v. funiculi spermatici, veines funiculaires, etc....)

↓ (through anastomoses)

↓ Lower region of anterior and middle groups of pampiniform venous plexus

↓ Venous vasculature of left epididymis and testis

(NOTE: The middle group of the veins of vas deferens usually accompanies the anterior group to form the spermatic vein)

Schema II

↓ Superior mesenteric vein

↓ Portal Vein

↓ Hepatic Vein

↓ Vena Cava Inferior

RETROGRADE

↓ Left Renal Vein

↓ Left spermatic Vein

↓ Left anterior and middle groups of venous plexus of spermatic cord (Plexus Pampiniformis)

↓ Venous Vasculature of Left Epididymis and Testis

If the patient's intestinal leiomyosarcoma had spread to the testis by way of the pathways outlined in Schema I or Schema II, passing through the portal circulation, one might expect the liver to act as a temporary barrier to tumor cells with initial metastases to the liver and subsequent generalized sarcomatosis preceding or accompanying metastasis to the testis. This is the type of spread which was previously described in the discussion of metastatic carcinoma of the testis secondary to primary carcinomas arising in the gastrointestinal tract, usually associated with wide-spread carcinomatosis. Since there was nothing to suggest liver metastases or generalized sarcomatosis in our case, these routes of metastasis (Schema I and Schema II) appear unlikely.

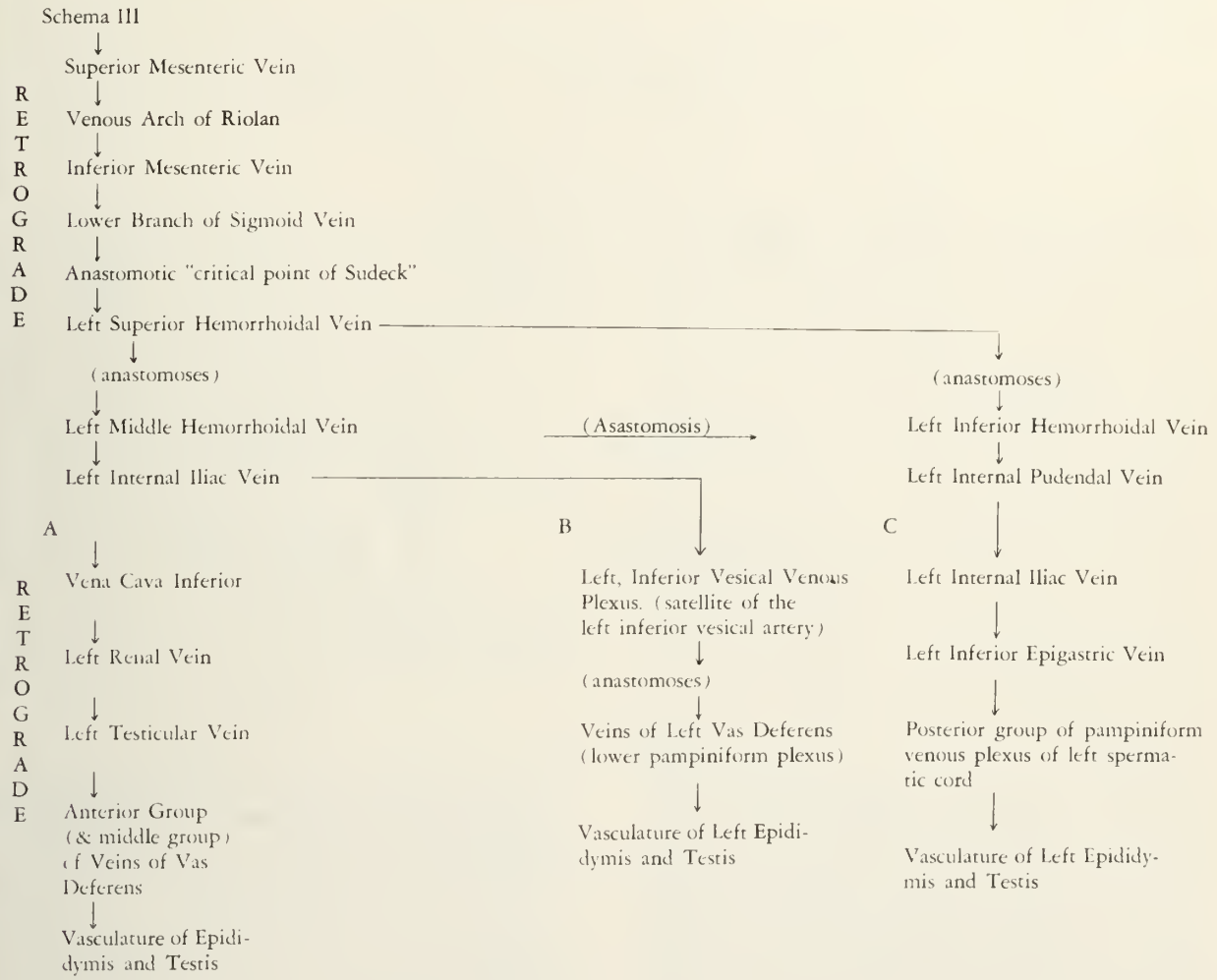
The retrograde venous pathway indicated by Schema III appears the more likely route of spread from the ileum to the testis. A glance at Schema III indicates that there are several choices of pathways after tumor cells reach the left superior hemorrhoidal vein. The eventual possible routes to the testis are indicated by pathways A, B and C under Schema III. Of these, the routes designated B and C appear the most likely.

Another possible route for ileum-to-testis transport of tumor cells is indicated in Schema IV, involving lymphatic pathways and assuming partial retrograde extension from the central group of abdominal juxta-aortic nodes to the left testis or from the left lumbar lymphatic trunk to the same testis. The retrograde pathway using the lymphatic collectors of the left spermatic cord seems the more likely lymphatic pathway.

Metastasis to the testis would also be possible by arterial embolism or by direct extension of the tumor to the left spermatic vein. This seems to us a less likely possibility.

If one assumes that the tumor was primary in the left testis and secondary in the ileum, the circulating tumor cells could conceivably use the same venous pathway as in Schema III utilizing the important portal-caval anastomosis represented by the "critical point of Sudeck."

If one accepts the possibility of testicular origin of the tumor, one should suggest possible anatomic sites from which a leiomyosarcoma might arise. Unlike the tubuli recti and the rete testis, the ductuli efferentes are all surrounded by a mantle of circularly arranged smooth muscle cells.[2] The very proximal portion of the ductuli efferentes is still somewhat sub-albugineal or intra-albugineal as they arise from the rete testis in the upper portion of the mediastinum. It seems reasonable to speculate that a leiomyosarcoma might arise from the smooth muscle cells surrounding the most proximal segments of the ductuli-



efferentes within the testicular mediastinum and from there extend toward the testicular stroma instead of extending into the epididymis.

Perhaps a more likely possibility is a primary testicular tumor developing from proliferating smooth muscle cells from an unrecognized pre-existing teratoma. Although this possibility cannot be excluded, there was no microscopic or gross evidence of the presence of other teratomatous elements. Theoretically, it would be possible for such evidence to be masked or effaced by the malignant overgrowth of one of its components.

Regardless of its origin, a leiomyosarcoma of the testis may be regarded as an extremely rare tumor. We have not found a previous report of either a primary or metastatic leiomyosarcoma of the testis in our search of the literature.

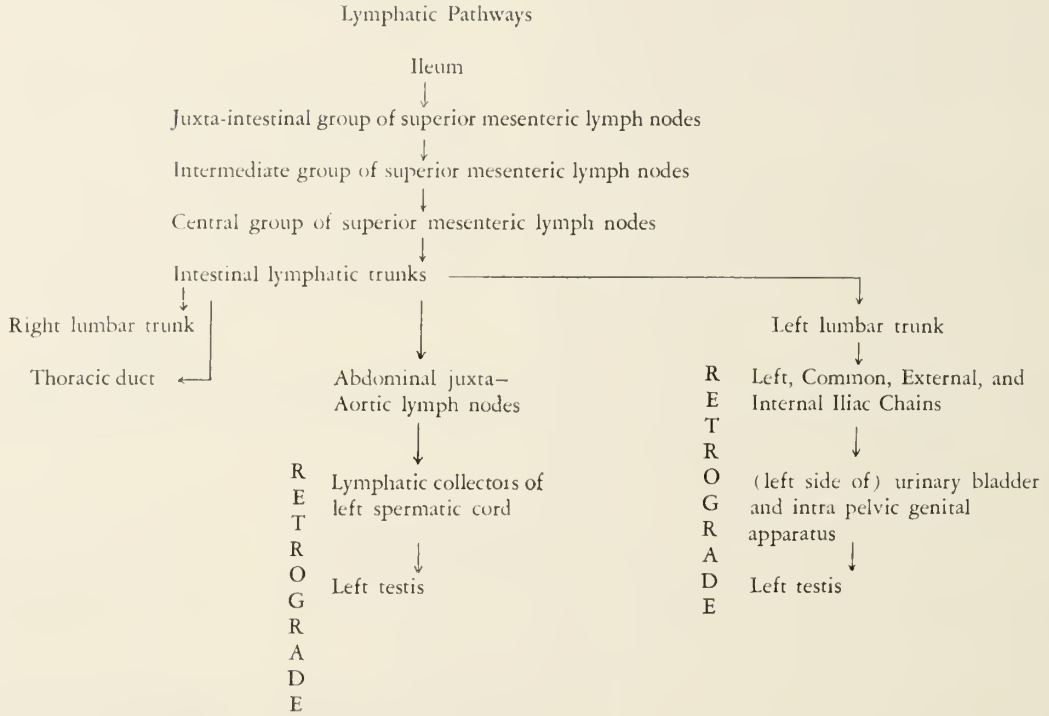
Summary

A patient with the unusual occurrence of a leiomyosarcoma involving both the testis and the ileum is the subject of this report. Historically the testicular enlargement preceded the severe abdominal pain which led to an exploratory laparotomy by which the presence of the tumor of the ileum was disclosed. Included in this report is a discussion of the possible sites of origin of the tumor and the possible pathways by which it may have been spread.

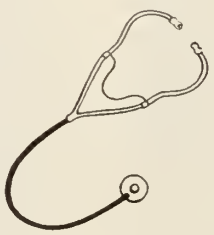
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Schema IV



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A Screening Test For Elevations In Cholesterol And Triglycerides

PATRICIA M. ROSSI*

Bloor[1] has defined lipids as "a group of naturally occurring substances consisting of the higher fatty acids, their naturally occurring compounds, and substances found naturally in chemical association with them." The lipids are diverse in their chemical composition but have properties in common. They are insoluble in water but soluble in one or more organic solvents[2]; they are organic compounds made up of carbon, hydrogen, and some oxygen, and they are fatty acid esters or compounds that can form such esters. Lipids are classified as simple, compound or derived. The simple lipids include the true fats, waxes, and sterols.[3]

The true fats are esters of glycerol and three fatty acids and are called triglycerides. In nature most of the triglycerides are mixed, that is, the three fatty acids are different or only two of the three are the same.[1] The type formula for a triglyceride is shown in Fig. 1.

Waxes are also simple lipids. They are esters of a fatty acid with a monohydric alcohol of high molecular weight.[3] One of the most important of these alcohols is cholesterol, a member of the steroid series.[1] Cholesterol is probably present in all tissue. It is found in the blood and bile and is a major constituent of gallstones.[2] Its structural formula is shown in Fig. 2.

After a meal containing fats, the lipid level in the blood gradually rises for three to five hours. Return to a normal lipid level may not be complete for as much as ten hours. "The serum lipids are elevated even in the post absorptive state in persons with uncontrolled diabetes mellitus, in persons with ketosis from other causes as starvation, and in persons with nephrosis or the nephrotic stage of glomerular nephritis. In obstruction of the biliary system and usually in hypothyroidism serum, cholesterol is increased. There are two idiopathic disorders of lipid metabolism; in one the cholesterol is increased, and in the other the triglycerides are increased.[3]

Obviously there is a need for a simple screening test for elevated serum lipids. Such a test requiring little time, manipulation, and expense to the patient would be a valuable tool in routine examination and observation. The precipitation of total lipids by a phenol solution holds great promise as the answer to this need.

Dilution of serum with a 1% phenol solution at a high salt concentration in distilled water precipitates total lipids. One volume of serum in eighteen volumes of reagent is allowed to stand for thirty minutes, shaken, and the resulting turbidity read in a spectrophotometer at 650 mu. The optical density is proportional to the total lipids in the serum.

The method used in this study was that of Kunkel, Abrens, and Eisenmenger.[4] The reagent used was 1% liquid phenol and 12% NaCl in distilled water. The reagent was refrigerated when not in use. 0.1 ml. of the serum was added to 1.8 ml. of the reagent in 10x75mm. Coleman tubes. After a thirty minute incubation at room temperature, the tubes were shaken and the optical density was read at 650 mu. in a Coleman Spectrophotometer against a reagent blank.

A $BaCl_2$ solution was prepared with 1.15 gms. $BaCl_2 \cdot 2H_2O$ made up to 100 ml. with distilled water. The standard used was 3.0 ml. of the stock $BaCl_2$ solution made up to 100 ml. with 0.2N H_2SO_4. This standard was 20 turbidity units at 650 mu. Standards of 5, 10, 40 and 80 turbidity units were also prepared and read against a distilled water blank.

The number of turbidity units obtained by each test serum was multiplied by 16.6 and added to 267 to give mg. % total lipids.

mg. % total lipids = (turbidity units x 16.6) + 267

Total lipid determinations were performed on fifty-four serums for which cholesterol values were available and on forty-two serums for which triglyceride values were available. The population tested consisted of both resident and clinic patients at a 320 bed general hospital. No attempt was made to determine age, sex or diagnosis of the patients. The normal value for serum cholesterol was considered to be 150 to 250 mg. per 100 ml. Of the serums tested, 42.6% had cholesterol values above the normal range. The normal value for serum triglycerides was considered to be 29 to 134 mg. per 100 ml. Of the serums tested, 38% had triglyceride values above the normal range.

COMPARISON OF VALUES OBTAINED

Total Lipids *mgms/100 ml.*	*Patients With Elevated Triglycerides*		*Patients With Elevated Cholesterol*	
Below 630 (8 pts.)	0/6	0%	0/8	0%
630- 639 (7 pts.)	1/5	20%	0/7	0%
640- 679 (4 pts.)	3/3	100%	1/4	25%
680- 699 (32 pts.)	10/26	38.4%	19/32	59.5%
900-1300 (3 pts.)	2/2	100%	3/3	100%
Totals 54 pts.	16/42	(38%)	23/54	42.6%)

See Charts 1 and 2

*Submitted as thesis while a student in Medical Technology at University of Maine and Eastern Maine Medical Center. Awarded First Prize at Annual Meeting (September, 1969) by Maine Society of Medical Technologists.

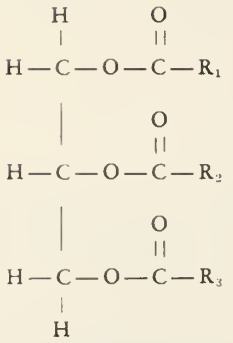


FIG. 1

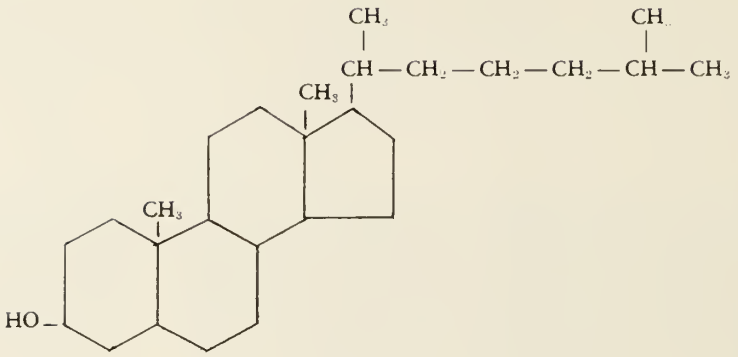


FIG. 2

CHART 1

Total Lipids mgms/100 ml.	*Cholesterol mgms/100 ml.*	*Total Lipids mgms/100 %*	*Cholesterol mgms/100 ml.*
482	188	715	281
482	196	732	226
		732	281
		749	216
516	156	749	236
533	129	749	238
533	183	749	275
566	182	749	282
566	193	749	292
		749	298
		782	239
616	208	782	262
632	196	782	264
632	201	782	271
632	218	782	314
632	219	789	323
632	220		
632	225		
632	240		
649	197	815	245
649	198	815	276
649	239	831	273
649	273	831	320
682	221	831	325
682	236	848	304
682	242	891	299
		898	335
715	205		
715	215	914	252
715	217	914	380
715	223		
715	265	1246	484

100% of TL values below 600 (7/7) – Cholesterol values *below* 200

over 95% of TL values below 700 (21/22) – Cholesterol values *below* 250

57% of TL values between 700-800 (12/21) – Cholesterol values *above* 250

91% of TL values above 800 (10/11) – Cholesterol values *above* 250

CHART 2

Total Lipids mgms/100 ml.	*Triglycerides mgms/100 ml.*	*Total Lipids mgms/100 ml.*	*Triglycerides mgms/100 ml.*
482	80	748	85
482	109	748	109
		748	126
		748	127
		782	49
		782	73
516	54	782	88
566	52	782	112
566	98	782	140
		789	168
616	102	815	70
632	85	815	93
632	95	815	233
632	110	815	266
632	116	831	119
632	169	831	135
649	137	831	236
649	145	831	353
649	159	897	284
682	90		
715	57		
715	116	914	198
715	184		
715	218		
732	84	1246	354
732	89		

100% of TL values below 600 (5/5) – Triglyceride values below 110

over 90% of TL values below 640 (10/11) – Triglyceride values below 135

74% of TL values below 800 (23/31) – Triglyceride values below 135

over 66% of TL values between 800-900 (6/9) – Triglyceride values above 135

100% of TL values above 900 (2/2) – Triglyceride values above 195

Correlation coefficients of the serum total lipids with the serum cholesterols and of the serum total lipids with the serum triglycerides were determined by the Variable Squares Method:

$$\text{mean value } (\bar{x}) = \frac{\text{sum of values}}{\text{number of values}}$$

$$\text{standard deviation } (s) = \sqrt{\frac{\Sigma x^2 - \frac{(\Sigma x)^2}{n}}{n-1}}$$

$$\text{true sum of squares} = \Sigma x^2 = \Sigma x^2 - \frac{(\Sigma x)^2}{n}$$

$$\text{true sum of products} = \Sigma x_1 \cdot x_2 = \Sigma x_1 \cdot x_2 - \frac{(\Sigma x_1 \cdot \Sigma x_2)}{n}$$

$$\text{correlation coefficient} = Y_{12} = \frac{\Sigma x_1 \cdot x_2}{\sqrt{(\Sigma x_1^2)(\Sigma x_2^2)}}$$

Triglycerides $\bar{x} = 137.3$

$s = 75.24$

Total Lipids $\bar{x} = 738.9$

$s = 347.4$

True sum of squares $\Sigma x^2 \tau\gamma = 2321486$

$\Sigma x^2 \text{TL} = 1134908.7$

True sum of products $\Sigma x \tau\gamma \cdot x \text{TL} = 199250$

Correlation coefficient $Y \tau\gamma \text{TL} = 0.390$

The correlation between the values obtained by the total lipids screening test and triglycerides values on the same serums was significant.

Cholesterols

$\bar{x} = 249.6$

$s = 56.4$

Total Lipids

$\bar{x} = 720.1$

$s = 128.7$

true sum of squares

$\Sigma x^2 \text{ch} = 168352$

$\Sigma x^2 \text{TL} = 878021$

true sum of products

$\Sigma \text{xch} \cdot x \text{TL} = 335688$

correlation coefficient

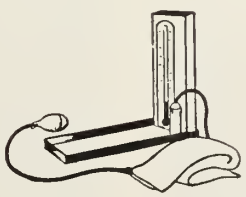
$Y \text{ch TL} = 0.873$

The correlation between the values obtained by the total lipids screening test and cholesterol values on the same serums was significant.

It has been demonstrated, then, that the precipitation of total lipids with a phenol solution is a reliable screening test for elevations in cholesterol and triglycerides.

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Cerebral Dysfunction, EEG And Neuropsychological Testing

A Preliminary Report

Irwin M. Pasternak, M.D.* and Elizabeth J. Levinson, Ph.D**

Increased interest has been shown in recent years by those in the medical and psychological professions, and among educators and the general public, in identifying and providing treatment and services for the hyperactive child, the child with minimal brain dysfunction, and various partly overlapping groups of children such as those with learning disabilities, dyslexia, etc. This group of problems is frequently classed together under the rubric of the hyperkinetic syndrome. The primary features of this disorder include the following: hyperactivity, impulsivity, emotional lability, limited concentration and attention span, sleep disturbances, possible enuresis, and learning disorders. The varying degrees of these symptoms usually combine into a presenting chief complaint of severe behavior disorder, either at home or at school, or a primary learning inhibition which may take a specific form such as dyslexia. The probability that a good number of such children suffer from organic brain damage or dysfunction caused by preventable or partially preventable complications of pregnancy and perinatal conditions continues to be increased by research findings.[9,10]

As a contribution toward identification, provision of proper treatment and services, and eventual prevention, the present writers have been conducting for the past year a two-pronged program. For all children referred to The Counseling Center who appeared to have the hyperkinetic syndrome, a learning disability, or any of the related disorders, both an EEG and administration of the Reitan Neuropsychological Battery have been employed. In addition, the Bender Gestalt Test, a test of ability to read connected material, and a small number of projective tests have usually also been given.

Method

Subjects – A total of approximately fifty cases was evaluated from October 1968 through September 1969, ranging in age from five to sixteen years. The selection of cases was made at a disposition conference attended by both authors, at which time referral and intake information, reports from physicians and schools, etc., were reviewed on all cases showing behavior and learning problems, to determine whether minimal or more extensive brain damage or dysfunction might exist.

Instruments Used – For obtaining the electroencephalogram, a Medcraft Model K 8-channel instrument was used. In almost all cases, the standard international placement of 22 electrodes was applied, with both ears serving as grounds. An abbreviated placement procedure of 10 electrodes was used with the extremely hyperactive or young, uncooperative child. A routine series of recording runs was then obtained, consisting of the following: standard unilateral; left unilateral; right unilateral; intercoronal; standard bipolar I; standard bipolar II; large anterior triangle study; large posterior triangle study; standard bipolar I with hyperventilation; and standard bipolar II with photic stimulation. Small triangle studies and sleep studies were done only if indicated. The records were interpreted by the first author.

The Reitan Neuropsychological Battery is a testing instrument developed by Ralph M. Reitan, a research psychologist, for the more discriminating investigation of brain damage or dysfunction, chiefly of the cerebral lobes. Much research based on or using the battery has been done by Reitan and his collaborators, and many studies published, a few of which we cite.[1–8]

As fully developed by Reitan, the battery has three forms, one (the original battery) suitable for adults and adolescents aged fifteen or older; one for children aged nine to fourteen; and one for children aged five to eight. The adult battery includes five major tests taken from the similar battery developed earlier by Ward Halstead at the University of Chicago: these are the Category Test, the Tactual Performance Test, the Finger-Tapping Test, the Seashore Rhythms Test, and the Speech Perception Test. Also included are the Wechsler Adult Intelligence Scale; the Wide Range Achievement Test; the Trail-Making Test; a modification of the Halstead-Wepman Aphasia Screening Test; the Lateral Dominance Test; and the Sensory-Perceptual Examination. This last test provides measures of sensory-perceptual functioning under bilateral simultaneous stimulation in visual, auditory, and tactile modalities; of finger-localization; and of tactile discrimination and stereognosis on the finger-tips. Some of these tests measure abstract intellectual abilities and academic achievement level. Others measure sensory, perceptual, and motor functions. A number of them yield comparative measures of the functioning of the two cerebral hemispheres.

For younger patients, the Wechsler Intelligence Scale for Children is substituted for the adult Wechsler test and some of the other tests are shortened and simplified. For the still younger group, some tests are replaced by similar, more age-appropriate tests. Responses of all child patients

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are of course judged by comparison with those of normal children of similar age.

The Reitan Battery yields not only information relevant to possible organic damage or dysfunction but also to academic progress and to intellectual level, both verbal-abstract and spatio-perceptual-motor. The forms of the battery used for children, however, yield little or no information on personality or emotional factors. The battery, therefore, is usually supplemented by projective tests to permit assessment of the emotional components of the child's problem.

Procedure – Typically the children are brought to The Counseling Center twice, each time for a two- to three-hour session conducted by an assistant psychologist. At the first session, the intelligence and achievement tests, a few additional elements of the Reitan Battery, and the projective tests are usually given, followed at the second session by the rest of the Reitan Battery. Results are analyzed in part under the supervision of the second author, who analyzes and interprets the Reitan Battery results and integrates them with the various other findings.

In the meantime, or soon after the testing, the EEG is administered by trained technicians at the EEG Laboratory. The average time of administration with a cooperative patient is approximately 45 minutes. The record is then interpreted by the first author. If either the Reitan Battery or the EEG has indicated the probable presence of brain disorder, the child and parents are then seen by the first author for interpretation and for consideration of medication. Medication is prescribed if indicated, and in these instances return appointments for supervision are scheduled.

The second author then, or soon after, holds an interpretive interview with the parents and, when appropriate, with the child. The results of the psychological tests are presented in some detail. Intellectual abilities and emotional problems as shown in the child's test responses are interpreted and suitable home management is discussed. An effort is made to give information in such a way as to provide the parents with practical understanding of the child's needs, to relieve unnecessary anxiety, and to foster a hopeful outlook on the part of the child himself.

When it appears necessary, further counseling of the parents, or psychotherapy for the child or for the family, are offered. Further evaluations, as for speech or hearing, may be recommended. In addition, a report is sent to the physician if one is involved, and a modified report, presenting school-related findings and recommendations, is sent to the child's school.

Results

The results of this effort are not yet ready for full analysis. Instead, a preliminary account will be presented.

It was the general impression of both authors that there was good correlation between the EEG and the Reitan Battery findings concerning the overall presence or absence of minimal or more extensive brain dysfunction, although there were occasional instances where positive findings appeared on only one measure. It was assumed in these latter cases that one measure had shown a false negative. Both tests seemed to be more sensitive instruments than the standard neurological examination or psychological screening with a single or a few brief tests, such, for example, as the Bender Gestalt alone. Localization findings were present in a small number of cases on both measures, but more often with the Reitan Battery. The localization findings appeared, in fact, to be correlated only randomly and at times were completely at variance.

We shall now summarize three representative case records.

Case 1: Male, CA 14 yr. 0 mo. referred for explosive temper outbursts. Member of a family with low socioeconomic status; paternal excessive drinking followed by divorce; temporary mental illness of mother with hospitalization; and multiple family problems including conviction of the mother's "boy friend" for rape of the boy's older sister. The mother reported that the boy had seizures beginning at 6 mo., numbering up to 15 per day, but cessation at 3 yrs.

On the Reitan Battery, he showed definite signs of probable brain injury. He had average overall intelligence but his Verbal IQ was 20 points below his Performance IQ and he had significantly poor scores on both the Category Test and the Trail Making Test, Form B. On the other hand, he did well on the Tactual Performance Test and several other measures. There was definite evidence of lateralized damage consisting of 3 instances of finger agnosia on the right hand but none on the left; 2 instances of tactile imperception on his right hand but none on the left; and slightly more errors in finger-tip tactile discrimination on his right hand than on his left. Taken together, these findings indicate diffuse damage affecting some high-level intellectual functions more than others, and point definitely to greater involvement of the left cerebral hemisphere. An old head injury is suggested.

The EEG in this case was read as indicating a seizure disorder. An occasionally poorly modulated 9 per second alpha rhythm was seen throughout the record. There were 2 to 5 second runs of superimposed bitemporal theta waves in the bipolar leads. The anterior triangle study showed runs of bifrontal 6 to 8 per second low voltage theta waves. Hyperventilation produced isolated spike waves eventually resulting in paroxysmal bursts of 3 to 4 per second high voltage spike waves. No asymmetry or focal abnormality was seen.

In this case, therefore, the Reitan Battery alone provided evidence of specific localization, while the EEG alone identified the condition as a seizure disorder. There was good agreement, however, as to the presence of the dysfunction.

Case 2: Male, CA 16. Referred for constant physical complaints (head and gastric pains) without apparent physical cause; dislike of school and poor school progress; and problems in interpersonal relations. He comes of a medium-income apparently stable family, the father a paper mill worker. His history included a fall down a chimney at age 3, followed by a 2-week hospital stay during which he was unconscious or semiconscious; the parents, however, said they had been told there would be no sequelae. School entrance had been delayed because of hyperactivity and he had also failed one early grade. He was reported also to have had many falls resulting in fractures and to have poor gross motor coordination.

The Reitan Battery showed only minimal brain dysfunction or possibly none. He had average intelligence with no subtest scores below the average range, though two were very low in this

range. Scores on the Category Test and Tactual Performance Test were average or better. His academic level was two years below his grade placement and four years below his age. He was left-handed, yet had lower tapping speed in this hand; however, since he had broken his left wrist 2 years previously, this fact had to be disregarded. No sensory imperception or finger agnosia appeared. There were indications of mild astereognosis and poor finger-tip tactile discrimination, about equal on both hands; there was thus no evidence here of lateralization. The one significantly bad score was obtained on the Trail Making Test, Form B which requires sustained concentration and ability to follow a complex sequence of alternating numbers and letters. The test results were considered suggestive of brain dysfunction but inconclusive, since the failures noted could have been caused by emotional disturbance.

The EEG in this case was read as abnormal, indicating a seizure disorder and compatible with psychomotor epilepsy. The record was somewhat disorganized with a basic 9.5 per second alpha rhythm. There were frequent paroxysmal 0.5 to 1.5 second bursts of moderate voltage, spiking, theta waves throughout the record, in all leads and symmetrically distributed. Hyperventilation produced further slowing to paroxysmal discharge of 3 to 4 per second high voltage delta waves in all leads. No focal abnormalities were noted. Slow waves appeared more prominent in bitemporal-parietal leads.

In this case, therefore, organic dysfunction was definitely indicated by the EEG, which served as the basis for medication, while because of its relatively slight and non-lateralized effect on intellectual and sensory-perceptual functioning, the Reitan Battery could not unequivocally indicate it.

Case 3: Male, CA 8 years, 10 mo. Referred for poor school progress with reversals of numbers and letters, and short attention span; difficulty in tying shoes and dressing self; and drooling. The second child of an apparently stable family, the father a farmer. His history included, for the mother, scarlet fever when 6½ to 7½ mo. pregnant; for the boy, high fevers ascribed to allergies, at 5 months; slow motor milestones and toilet training; and clumsiness as a young child.

The Reitan Battery showed borderline mental retardation (IQ, 72) with no subtest scores above the borderline level and two slightly below. On the Category Test, the Tactual Performance Test, the Target Test, and the Finger Tapping Test, his scores were too low even for his low IQ and on the Progressive Figures test, fully as low. Academically he scored on the average ½ year below his grade placement and 1½ years below his age; in arithmetic he scored 2½ years below his age. On the Aphasia Screening Test and the Bender Gestalt test, his copies of simple designs showed extreme distortions, some of them of kinds highly associated with brain damage. Yet on two tests using pictures to be identified or conceptually paired, his scores were average or above. Scores on tests of hand-eye coordination, sensory imperception, and finger agnosia, had to be disregarded, since he was unable to understand or keep in mind the instructions. Finger-tip tactile discrimination and stereognosis appeared to be equally poor on both hands. Lateralizing deficits included a relatively far poorer score on the Tactual Performance Test with his dominant right hand than with his non-dominant left, indicating left cerebral dysfunction; and far poorer strength of grip in his left hand than expected, relative to his right, indicating right cerebral dysfunction. The final impression was one of undoubted cerebral dysfunction, affecting both hemispheres, lowering intellectual capacity and entailing poor school progress, while leaving him a few normal abilities. The dysfunction appeared to be chronic, of long duration, and non-progressive.

The EEG of this patient was interpreted as abnormal, showing non-specific dysrhythmia. The record was poorly organized in general, with no clearly sustained alpha rhythm. There was poor modulation of frequency and amplitude, with isolated symmetrical spike waves throughout the record, and frequent paroxysmal bursts of 4 per second delta waves of greater than 150 microvolts. Delta rhythm was slightly more prominent in RIGHT parietal and temporal leads. Hyperventilation produced marked slowing and increased voltage which became a sustained, symmetrical 4 per second delta rhythm in all leads.

In this case, both EEG and the Reitan results indicated serious dysfunction, but only the EEG implicated one hemisphere (the right) more than the other. The inability of the Reitan procedures to discover laterality in this case may be due in part to the requirement that the subject shall understand and follow instructions, which this patient at times could not do. The EEG makes no such requirement.

Discussion

Both authors agree that these two diagnostic tools are alike in providing the major advantages of being easily and painlessly administered, relatively inexpensive, completely safe, and neither alarming nor disruptive to the child's life pattern. They are administered on an out-patient basis by assistants or technicians. Only for the interpretation of results are extensive training and professional time required. We feel that in many cases hospitalization and potentially dangerous procedures such as pneumoencephalography or angiography could be obviated by the use of these measures. Both tests were considered necessary in performing their complementary functions of determining the presence and, where possible, of localizing lesions or dysfunctional regions.

It should be considered that minimal cerebral dysfunction underlies, much more frequently than is presently appreciated, what may appear to be a simple school or behavior problem within the range of normality. A history of closed-head injuries; concussion; birth trauma, including especially anoxia; infantile seizures; or prematurity, should alert the physician to consider further neuropsychological evaluation. An example would be an automobile accident case with head trauma, no evidence of skull fracture on skull films, and a normal neurological examination, followed by a subsequent drop in school performance or personality change.

Summary

A project is presented of evaluating children with hyperkinetic syndrome and related learning or behavior problems by means of both electroencephalography and the Reitan Neuropsychological Battery. Findings indicate good correlation in detecting minimal cerebral dysfunction by the use of these two simple, harmless, relatively inexpensive, outpatient diagnostic tools.

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Maine Genetics Counseling Center

JOHN C. VAN PELT, M.D.

The Pediatric Department of the Maine Coast Memorial Hospital in Ellsworth and personnel of The Jackson Laboratory in Bar Harbor have established a genetic counseling team to serve the entire State of Maine. This effort is made possible by a grant from the National Foundation – March of Dimes.

The rare occasion arises in most medical practices of confrontation with a significant heredofamilial disorder that creates immediate or projected social, familial, and financial problems of magnitude. This is particularly likely in the practice of pediatrics, but is not limited to any one area. These can be some of the most complicated, emotionally charged, multifaceted of clinical problems, and also the most rewarding.

Because of the scientific expertise and global viewpoint needed in the approach to such families, the individual physician often cannot find the time or have the wisdom to give adequate counsel. The realization of this by the MCMH physicians, plus the proximity of a first-rate genetic research facility, lead to the formation of the counseling team.

In concept, this is not a diagnostic service; it is hoped that referrals to the center will be made with index diagnoses established. (Diagnostic services are available through various state agencies, private physicians, and the National Foundation Birth Defects clinic in Portland.) Upon referral, the center is then prepared to arrange the acquisition of a complete pedigree, chromosome analyses on appropriate relatives, and the like, to get at the information required. Travel of the team to the family's home area may be arranged under certain circumstances.

An essential feature of the center is the inclusion of the referring physician as a member of the team, and the actual counseling will be with this individual rather than directly with the family. The service is thus designed for the physicians of Maine, to enable them better to advise the patients they serve.

The team consists of two fully trained pediatricians, a geneticist, and a laboratory cytologist. In addition, back-up consultation in all major specialties, laboratory and diagnostic services are available as required in the Ellsworth-Mt. Desert Island area. The extensive facilities, library and personnel of the Jackson Laboratory may be utilized by the center staff for study and consultation, and its research facilities may be available at the discretion of its Director.

The eastern seacoast area of Maine provides a particularly fertile substrate for this center, with numerous isolated, highly inbred communities. Similar conditions exist all across Maine and New Brunswick. It is hoped that the MGCC will prove a valuable adjunct to medical practice in this area.

50 Union Street, Ellsworth, Maine 04605.

CEREBRAL DYSFUNCTION, EEG AND NEUROPSYCHOLOGICAL TESTING – A PRELIMINARY REPORT — *Continued from Page* 280

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X-Ray Of The Month*

This 33-year-old female was first admitted because of massive upper gastro-intestinal bleeding. She continued to have recurrent and progressive peptic ulcer disease.

Zollinger-Ellison Syndrome

Zollinger and Ellison first described the syndrome of recurrent peptic ulceration, gastric hypersecretion, and hyperchlorhydria associated with non-beta islet cell tumors of the pancreas.

Since the original description it has become evident that the disease carries a grave prognosis. Fifty-seven percent of 260 reported cases between 1955 and 1964 were dead within nine years. Death was due to perforation, obstruction, and hemorrhage, which are the complications of recurrent ulceration.

Conventional peptic ulcer operations are inadequate for this disease. The appropriate management following early diagnosis is total gastrectomy.

Certain radiological features are highly suggestive of Zollinger-Ellison Syndrome, and it is crucial for the radiologist and clinician to recognize these signs so that an early diagnosis will be made.

Some patients may already have had an inadequate surgical procedure before the proper diagnosis is made; for this reason the radiological signs can be divided into preoperative and postoperative changes.

Preoperative X-ray findings suggesting Z-E Syndrome:

1. Enlargement of mucosal folds in the stomach, duodenum and jejunum associated with gastric hypersecretion.
2. Peptic ulcer in an unusual location, especially at or near the ligament of Treitz.
3. Multiple peptic ulcers.
4. Irregularly enlarged mucosal folds in the proximal jejunum.
5. Dilated duodenal loop.

Postoperative X-ray findings suggesting Z-E Syndrome:

1. Rapidly appearing large craters in the region of the anastomosis.



2. Recurrent ulcers.
3. Multiple jejunal ulcers.

This patient exhibited all of the preoperative signs except #3. At the time of total gastrectomy, a non-beta islet cell tumor of the pancreas was found and removed.

*From the Department of Radiology, Maine Medical Center, Portland, Maine 04102.

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Let's be specific about Campbell's Soups... and *reducing diets*



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Lomotil acts to control the intestinal mechanisms of diarrhea; therefore, it is highly useful in controlling diarrhea associated with:

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irritable bowel · ileostomy · drug-induced diarrhea

Warnings Lomotil should be used with caution in patients taking barbiturates and with caution, if not contraindicated, in patients with cirrhosis, advanced liver disease or impaired liver function.

Precautions: Lomotil is a Federally exempt narcotic with theoretically possible addictive potential at high dosage; this is not ordinarily a clinical problem. Use Lomotil with considerable caution in patients receiving addicting drugs. Recommended dosages should not be exceeded, and medication should be kept out of reach of children. Should accidental overdosage occur, signs may include severe respiratory depression, flushing, lethargy or coma, hypotonic reflexes, nystagmus, pinpoint pupils, tachycardia; continuous observation is necessary. The subtherapeutic amount of atropine sulfate is added to discourage deliberate overdosage.

Adverse Reactions: Side effects reported with Lomotil therapy include nausea, sedation, dizziness, vomiting, pruritus, restlessness, abdominal discomfort, headache, angioneurotic edema, giant urticaria, lethargy, anorexia, numbness of the extremities, atropine effects, swelling of the gums, euphoria, depression and malaise. Respiratory depression and coma may occur with overdosage.

Dosage: The recommended initial daily dosages, given in divided doses until diarrhea is controlled, are as follows:

Children:	*Total Daily Dosage*
3-6 mo.	½ tsp.* t.i.d. (3 mg.)
6-12 mo	½ tsp. q.i.d. (4 mg.)
1-2 yr.	½ tsp. 5 times daily (5 mg.)
2-5 yr.	1 tsp. t.i.d. (6 mg.)
5-8 yr.	1 tsp. q.i.d. (8 mg.)
8-12 yr	1 tsp. 5 times daily (10 mg.)
Adults:	2 tsp. 5 times daily (20 mg.) or 2 tablets q.i.d.

*Based on 4 cc. per teaspoonful.

Maintenance dosage may be as low as one-fourth the initial daily dosage.

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Understanding "What's Important"

Charles F. Branch, M.D.
President, Maine Medical Association

After the obvious dichotomies within the Official structure of the American Medical Association over the past two years, yet the affirmation of cohesiveness by all concerned; the snowballing of the Federal commitment to health from 3.2 billion in 1960 to 20 billion in 1970; the distressing yet thought-provoking disturbances at the A.M.A. meeting in New York in July – most of us returned to the peace and quiet of Maine with deep gratitude for this haven of rest. In spite of the facetious though conciliatory remarks of Vice President Agnew, his speech solved no problems nor pointed any sound course of exploration. Although some of us missed the salient points in the address of retiring President Dr. Dwight L. Wilbur, "Clinical Sense, Social Sense, Common Sense," some of it must have left a deep impression for at the August meeting of the Council of the Maine Medical Association a committee was appointed to review the background, structure and future role of the Maine Medical Association by establishing a group or system of Priorities for the future development of your Association. Our Committee, under the inspired leadership of the astute and knowledgeable George Wood, III, M.D. of Brewer, has come up with the following carefully considered suggestions and guidelines.

As one not entirely disaffected with the demands and suggestions of the basically sound S.A.M.A., and one who through personal experience has indulged in the dissemination of knowledge and research funds, provided through the National Institutes of Health of the U.S.P.H.S., I cannot too strongly urge your immediate attention to a careful reading of this plan of suggested priorities presented by your Committee. The future of medicine in Maine in "clinical sense, social sense and common sense" must perforce, rely entirely on your personal reaction and fulsome involvement. To correctly assess the basic rights and prerogatives set forth as the position of the American Medical Association, if found sound and agreeable, must be correlated with the needs of the people of the State of Maine. This will require the most thoughtful study and involvement of all physicians.

What's Important

On June 1, 1853, eighty-two physicians of Maine formed the Maine Medical Association whose purposes, as defined in the constitution, are to promote the art and science of medicine, the protection of public health, and the betterment of the medical profession; and to unite with similar organizations in other states and territories of the United States to form the American Medical Association.

In 1969, 948 physicians are members of the Maine Medical Association. The role of these physicians in the Association varies from the reluctant payer of dues to an organization of whose usefulness he is uncertain, to the enthusiastic participant in county and state activities. The latter rare, the former abundant. Personally and professionally, we will struggle only for that in which we believe. This is particularly so in any voluntary association whose major power is persuasion.

If belief is to develop, there must be a better understanding and endorsement of the purposes, or the purposes should be re-defined. Once this clarification is accomplished, the logical next step would be discussions leading to formulation of priorities. These discussions should involve as many members as possible. There should, it seems, be a particular effort to include the younger physicians for success in attaining the priorities will, through the years, rest in great part on them. As there will be no instant solutions, we must recognize the old problems and anticipate the new; develop effective methods traditional or innovative to resolve them; and coordinate all segments of society in these efforts.

Certain segments of society and physicians may have different attitudes toward the superficial and more fundamental aspects of medical care. For example, individuals must on occasion be reminded of their own role in preserving or improving their health. This is sometimes difficult to understand and respond to. They may feel "a pill" or a visit to a physician is a substitute for more exercise and less eating. At a more basic level, some believe that "medical care is a right." The Maine Medical Association must determine its position. Possibly it might be the same as was adopted by the American Medical Association in its annual meeting of 1969. This position is as follows:

1. It is the basic right of every citizen to have available to him adequate medical care;
2. It is the basic right of every citizen to have a free choice of physician and institution in the obtaining of medical care;
3. The medical profession, using all means within its disposal, should endeavor to make good medical care available to each person.

'Though differences of varying magnitude may appear,

this should not prevent continuing attempts to pursue the priorities in a constructive manner.

The opinions of many, both within and without the profession, may well be sought before the "temporarily final" list of "things to do" is compiled. So that we may understand more clearly our *own* attitudes, groups of physicians throughout the State of Maine should discuss *at length* the many facets of medical care. Each might construct a different "outline" – this should be encouraged. For those who would like a point of departure for their ruminations and discussions, an outline of priorities has been developed and is presented with comments – succinct, and, I hope, lucid.

I. *Endeavor to make good medical care available to each person.*

To single this out as our first priority immediately alerts all that our association will demonstrate in its activities a primary concern for the health of the people and that its entire membership has a social sense as well developed as its clinical sense. It will lead in assuring a constantly advancing medical care system in Maine; a system which has balance and does not promise unattainable expectations; one which recognizes the important difference between health needs and health demands.

A. Health manpower.

How can we increase the number of students entering medical school from Maine each year, but even more importantly to the people, what methods are available to further encourage physicians to return to practice in Maine? Should we pursue more diligently the high school student interested in science and the desire to help others? The guidance personnel of the secondary school system should be more thoroughly educated as to the opportunities in medicine, not only as physicians, but also as nurses and paramedical personnel. Such education could be accomplished either in small groups or at a state level. An equally aggressive approach might be taken at the college level involving student, guidance and deans. All should recognize that with 101 medical schools now available, they might well apply to institutions previously not on the students' "usual list." Our efforts in financial support of the Maine student have been good, but could be improved.

Is it at all practical to implement a system of "loan forgiveness" on a graduated basis for those returning to practice in our State?

Discussions of all of the above matters should immediately involve students at the various levels of education, and house officers. The final report of such might well be the subject of a morning conference at our annual meeting.

The relation of the physician to the osteopath is gradually being clarified at a national level and should be better understood within the state. Legislation toward forming a joint board of M.D. and D.O. within the Board of Registration may be an important step. Possibly the Board of Registration, even now, might allow an osteopath to take the examination generally offered the M.D.

All physicians recognize the continuing need for nursing services at various levels within our hospital and our public health service. We have in the past actively endorsed all forms of nursing education, including the much belabored diploma school. Should we now formulate and actively support a bill to be presented to the legislature for the financial support of diploma schools?

Other paramedical personnel will be increasing in number and our position should be clearly understood and supported. What aspects of medical care may safely be delegated to others? How may physicians assist in programs that will increase the numbers of paramedical personnel? An outstanding example of such effort is the Regional Medical Programs – Maine Medical Center – University of Maine Pediatric Nurse Associate Program starting November 1969.

B. Distribution of Health Service.

Data should be obtained and understanding developed as to the status of health services in the urban and rural portions of Maine. What is the role of "solo" practice and group practice in all areas? Are the emergency services adequate, and how may they be improved?

Community health centers have been suggested as a method of presenting medical care in a more acceptable form to those previously reluctant to seek aid. Should the clinics not be in the hospital environment? What role might these centers have in family planning and preventive medicine?

Throughout the problems of Health Manpower, and Distribution of Health Service runs the thread of developing technology which might permit the capabilities of medical personnel to be extended to more individuals.

II. *Promote the Art and Science of Medicine.*

A. Continuing Education – The precise role of the medical association in continuing education is uncertain. We have cooperated with the varying efforts, and possibly this should be our sole function. Is the relationship with the various specialty societies clear? Also, we should be more aware as an organization of the multitude of activities within the Regional Medical Program.

The Journal of the Maine Medical Association and our annual session do furnish continuing education in a limited fashion.

B. Surveillance of Individual Patient Care – This has been the subject of increasing interest within the profession, as well as in areas of government and the general public. The diligence with which we pursue this effort will be a major factor in deter-

mining attitudes of the government and public toward the profession. What mechanisms of peer review are available, and how effective are our Utilization Committee efforts?

C. Ethics & Discipline – The public should be made appropriately aware of availability of the services of our committees of Ethics and Discipline, both at a county and state level. In some parts of the country, the existence of these committees is advertised in the press.

As our Association is a voluntary one and persuasion our only tool, we have no final authority in determining who shall and shall not practice medicine. The Board of Registration might well be the group to restrict individuals. However, the Hearing Officer is a lawyer. The precise methodology and function of this Board should be evaluated.

III. *Socio-economic Factors in Medical Care.*

The total cost of health needs and demands continues to increase. Though the physician's fee is not the major part of this cost, we, as physicians, must assume increasing responsibility for continuing critical examination of all aspects of the health bill. We should unhesitatingly point out areas of waste, and assist in their correction.

A. Comprehensive Health Planning – This rapidly developing implementation of public law 89-749 should be one of major interest to all physicians. All aspects of it must be understood in order to appreciate the significance of its role in present and future health planning.

B. Financing – Each month, increasing coverage is afforded articles on health insurance, i.e., health cost and its financing. Should we more actively develop and present a system of voluntary health insurance which might be applicable to the one million citizens of Maine? How does the Association stand on the concept of income tax credits toward health insurance? The evidence of increasing interest of the government in health matters will require continuing reassessment by physicians, both individually and as groups. We should have a close liaison with the State Department of Health and Welfare. This liaison should not be used only in times of trouble.

C. Fee Schedules – The varying aspects of the determinant of the cost of physicians' services should be reviewed.

D. Medicine – Law

The relationships of physicians to law and the members of the bar are somewhat limited in most parts of Maine. A better understanding between the professions could be developed by the mechanism initiated approximately two years ago. The medical and law professions of the State of California are developing multiple bills for the legislature relating to malpractice. These ideas should be studied here.

IV. *Maine Medical Association – Organizational Structure.*

A. Role of the County Society – The health of the county societies varies from robust to moribund. Most suffer from low output failure. Why? Are they an outdated idea?

B. Relation to the American Medical Association – The Trustees of the American Medical Association have indicated an interest in visiting all state associations. This we should implement in 1970, possibly at the interim session of the House of Delegates. There are reports of various committees and councils of the AMA which are excellent. We should utilize them more effectively.

C. Executive Council Selection and Election of Officers and Committees – This should be reexamined in all of its aspects.

D. House of Delegates – This is the forum for all physicians to present their attitudes and to determine the direction this organization takes. Relatively little discussion develops, generally reflecting a lack of interest or a lack of knowledge. How can the younger physician become more quickly involved in the House of Delegates?

E. Administration – This cannot be adequately discussed until the remaining priorities have been defined. However, the opinions of some might be obtained.

F. Legislation – This is a *most* important aspect of our activities. Should we be presenting more specific legislation ourselves? What is the role of MEMPAC?

G. Communications Media – It would seem that we have relatively little activity in the area of communications, previously known as Public Relations. Is this of any importance?

Thus, we have attempted to develop a list of priorities. By what mechanism might the entire Association define its own priorities and implement them? It is suggested, first, that the Executive Council discuss this matter. The chairman of the Council could then appoint selected small committees (two to three members) to collect information and suggest positions that might be taken on a number of these problems. These committees could submit written reports and at the interim session of the House of Delegates, the entire matter could be discussed. Between April and the June annual meeting, the "final" draft could be prepared. This should be presented to the membership. Segments of it might be the subjects of varying conferences during the annual meeting. Throughout the coming months, reports might appear in the Journal of the Maine Medical Association.

In the coming year, we have an opportunity to assume the role of leader in seeking that which is best for the

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Maine Heart Association Notes

20 Winter Street, Augusta, Maine

Hypotensive Drug Therapy in the Management of Hypertension

The availability of a wide spectrum of potent hypotensive drugs during the past 20 years has led to their widespread use in an attempt to modify the adverse effects of systemic arterial hypertension.

The hypotensive agents commonly employed today include: reserpine, hydrochlorothiazide, methyldopa, pargyline, Aldactone-A®, hydralazine, and guanethidine.

It has become evident that successful lowering of the blood pressure will reduce the morbidity and the mortality rate resulting from hypertensive disease and will permit longer life and lesser incidence of heart failure, strokes, and uremia. These facts have been particularly emphasized by the changes . . . in the evolution of the most serious form of hypertensive disease namely malagnant hypertension. . . .

. . . In our hypertension clinic, we have also been impressed with the rarity of new cases of malignant hypertension since the increased use of effective hypotensive agents. . . .

In a group of 36 moderately severe hypertensive patients followed . . . during the past 16 years on a program of combined drug therapy, we have not seen any cases of cerebrovascular accident or pulmonary edema. . . . there have been no cases of uremia. However, two myocardial infarcts have occurred in this group.

Prior to initiating treatment . . . a number of procedures are necessary. First, one should attempt to evaluate not only the casual blood pressure reading, but also attempt to obtain more basal readings. . . . One must also evaluate the severity of the hypertension in terms of the fundi, the ECG, the heart size . . . , and if possible, renal function tests. . . . One must also perform investigations to rule out secondary or surgically correctable causes of hypertension, ...

After having completed the above assessment, one can then . . . divide the hypertensive patients into one of four groups . . . : *Group A,* mild, constant hypertension, otherwise normal; *Group B,* moderate hypertension, diastolic blood pressure usually 110 mm. mercury or higher, plus evidence of left ventricular enlargement and fundal changes; *Group C,* severe hypertension, diastolic blood pressure usually 120 mm. of mercury or higher, a more severe degree of left ventricular enlargement and fundal changes . . . ; *Group D,* malignant hypertension.

Group A. All Group A cases should be placed on a salt restriction and weight reduction diet as well as an exercise program and should be given sedation where necessary. In addition, male patients under 60 who do not respond . . . should be placed on mild drug therapy such as 25 mg. of hydrochlorothiazide several times a week. . . .

Group B. In this group, a combination of 0.1 mg. of reserpine and 25 to 50 mg. of hydrochlorothiazide daily may prove quite effective. The serum potassium should be checked at regular intervals. . . . Other therapeutic alternatives . . . include a daily combination of 250 to 500 mg. of methyldopa and 25 mg. of hydrochlorothiazide, or a combination of Aldactone-A 25 mg. plus 25 to 50 mg. of hydrochlorothiazide. . . .

Group C. These patients represent the advanced hypertensive group and are the ones most likely to develop serious complications. Therapy is started . . . using combinations of reserpine and thiazides, methyldopa and thiazides, or Aldactone-A and thiazides. Guanethidine is gradually added, . . . until the standing blood pressure is reduced to near normal levels. The closer one approaches to normal, the greater the risk of fainting or severe postural hypotension, and . . . one may settle for a slightly higher standing blood pressure in order to ensure a more comfortable existence. Six inch blocks can be placed under the head of the bed at night, ... In this way one takes advantage of the striking postural effects of guanethidine. One can also progressively increase the dose of methyldopa up to 1, 2 or even 3 gm. per day. . . . One may also add Adlactone-A in increasing amounts, but two tablets daily is usually enough, ...

In some cases with renal impairment one may choose to add hydralazine, since this drug and alpha-methyldopa are the only two which increase the renal plasma flow.

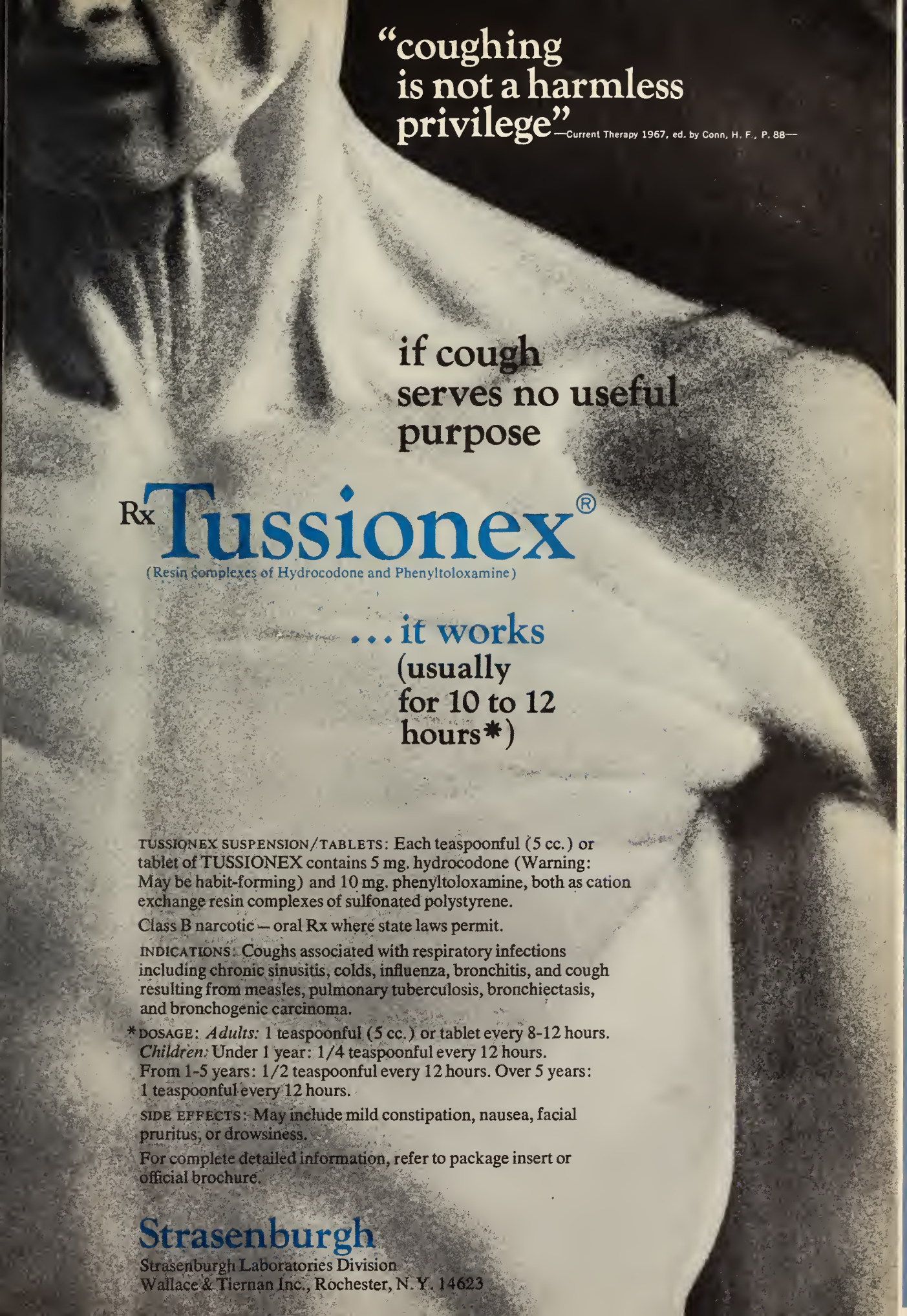
Group D. These are the patients with malignant hypertension and this condition should be regarded as a medical emergency. Parenteral therapy should be started immediately. . . . Intravenous Diazoxide, 300 mg. can be given at intervals, ... Intravenous Arfonad, 500 mg. in 500 cc. of dextrose and water, can be administered slowly. . . . Quanethidine . . . administered subcutaneously, intramuscular reserpine and intramuscular hydralazine, as well as intravenous furosemide 40 mg. represent other available choices. . . . One adds oral hypotensive agents as outlined under Group C, in a gradual and progressive fashion. . . . It should be noted that phentothiazine tranquilizers may interfere with the effectiveness of quanethidine.

. . . the drugs which are used have many side effects and these must be balanced against the expected benefits of treatment in each individual case.

. . . A knowledge of side effects, a cautious use of these drugs with a slow increase in the increments of dosage, and the use of combined therapy permits an effective hypotensive program with a minimum of adverse reactions.

Submitted by Jacob B. Dana, M.D., Maine Heart Association.

Reference: Editorial — American Heart Journal, Vol. 78, pages 433-436, 1969.



TUSSIONEX SUSPENSION/TABLETS: Each teaspoonful (5 cc.) or tablet of TUSSIONEX contains 5 mg. hydrocodone (Warning: May be habit-forming) and 10 mg. phenyltoloxamine, both as cation exchange resin complexes of sulfonated polystyrene.

Class B narcotic — oral Rx where state laws permit.

INDICATIONS: Coughs associated with respiratory infections including chronic sinusitis, colds, influenza, bronchitis, and cough resulting from measles, pulmonary tuberculosis, bronchiectasis, and bronchogenic carcinoma.

*DOSAGE: *Adults:* 1 teaspoonful (5 cc.) or tablet every 8-12 hours. *Children:* Under 1 year: 1/4 teaspoonful every 12 hours. From 1-5 years: 1/2 teaspoonful every 12 hours. Over 5 years: 1 teaspoonful every 12 hours.

SIDE EFFECTS: May include mild constipation, nausea, facial pruritus, or drowsiness.

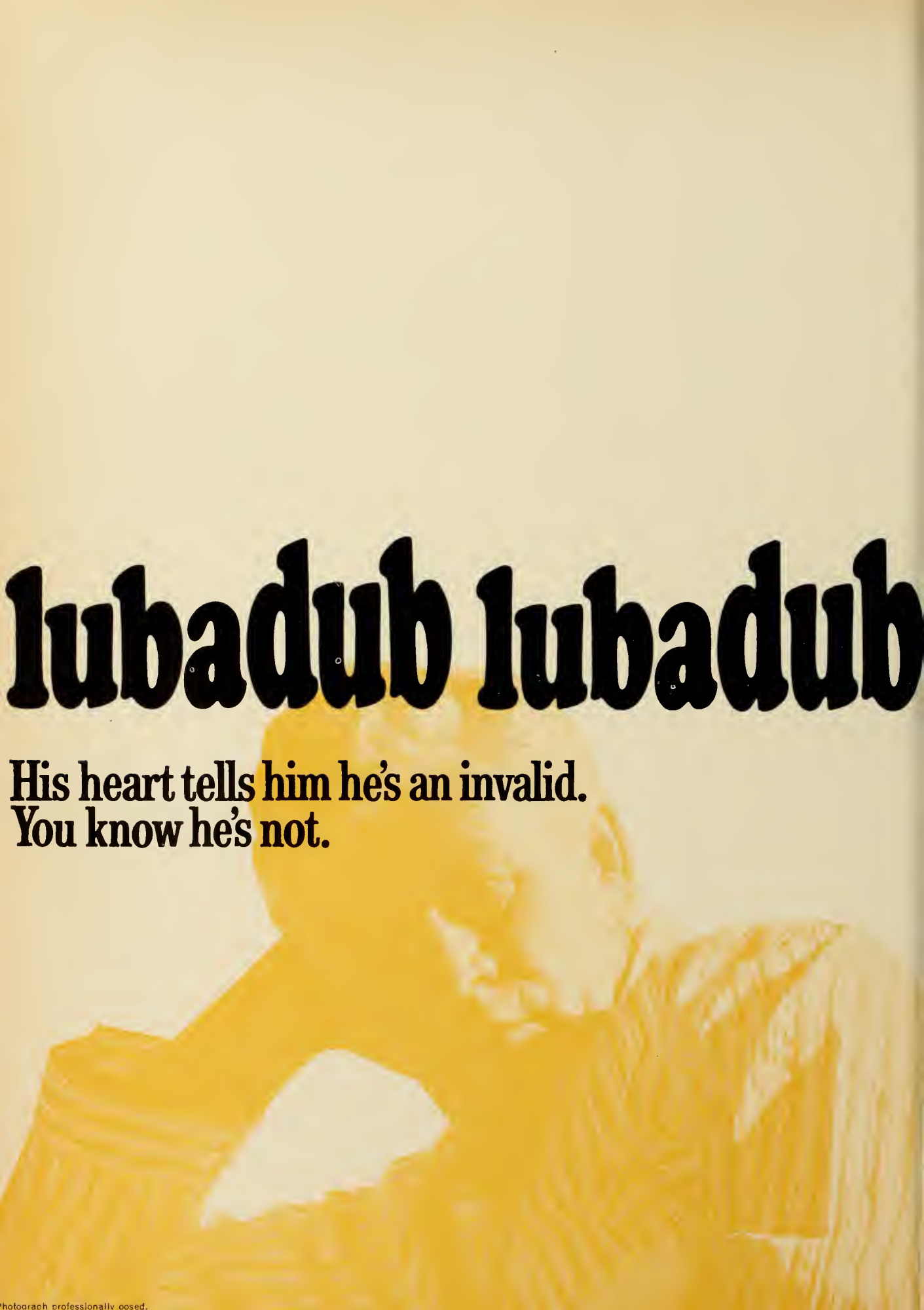
For complete detailed information, refer to package insert or official brochure.

Strasenburgh

Strasenburgh Laboratories Division
Wallace & Tiernan Inc., Rochester, N.Y. 14623

lubadub lubadub

His heart tells him he's an invalid.
You know he's not.



Photograph professionally posed.

Contraindications: History of sensitivity to meprobamate.

Important Precautions: Carefully supervise dose and amounts prescribed, especially for patients prone to overdose themselves. Excessive prolonged use has been reported to result in dependence or habituation in susceptible persons, as alcoholics, ex-addicts, and other severe psychoneurotics. After prolonged excessive dosage, reduce dosage gradually to avoid possibly severe withdrawal reactions. Abrupt discontinuance of excessive doses has sometimes resulted in epileptiform seizures.

Warn patients of possible reduced alcohol tolerance, with resultant slowing of reaction time and impairment of judgment and coordination.

Reduce dose if drowsiness, ataxia or visual disturbance occurs; if persistent, patients should not operate vehicles or dangerous machinery.

Side Effects include drowsiness, usually transient; if persistent and associated with ataxia, usually responds to dose reduction; occasionally concomitant CNS stimulants (amphetamine, mephentermine sulfate) are desirable. Allergic or idiosyncratic reactions are rare, but such reactions, sometimes severe, can develop in patients receiving only 1 to 4 doses who have had no previous contact with meprobamate. Previous history of allergy may or may not be related to incidence of reactions. Mild reactions are characterized by itchy urticarial or erythematous maculopapular rash, generalized or confined to groin. Acute nonthrombocytopenic purpura with cutaneous petechiae, ecchymoses, peripheral edema and fever have been reported. One fatal case of bullous dermatitis following intermittent use of meprobamate with prednisolone has been reported. If allergic reaction occurs, meprobamate should be stopped and not reinstituted. Severe reactions, observed very rarely, include angioneurotic edema, bronchial spasms, fever, fainting spells, hypotensive crises (1 fatal case), anaphylaxis,

ubadubdub lubadu

Anxiety is expected in the cardiovascular patient. A little may even be desirable.

But when anxiety is exaggerated . . . when it interferes with sleep . . . when it aggravates cardiovascular symptoms, your help may be needed.

Naturally, you'll want to reassure the patient.

And perhaps prescribe Equanil (meprobamate) as adjunctive therapy. It helps relieve anxiety and tension specifically, yet gently.

Almost 15 years' use has shown that Equanil is usually well tolerated as well as effective. Side effects are generally limited to transient drowsiness; serious, therapy-interrupting side effects are rare.

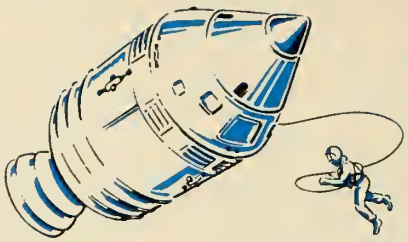
stomatitis and proctitis (1 case) and hyperthermia. Treat symptomatically as with epinephrine, antihistamine and possibly hydrocortisone. Aplastic anemia (1 fatal case), thrombocytopenic purpura, agranulocytosis and hemolytic anemia have occurred rarely, almost always in presence of known toxic agents. A few cases of leukopenia usually transient, have been reported on continuous administration.

Meprobamate may sometimes precipitate grand mal attacks in patients susceptible to both grand and petit mal. Extremely large doses can produce rhythmic fast activity in the cortical pattern. Impairment of accommodation and visual acuity has been reported rarely. After excessive dosage for weeks or months, withdraw gradually (1 or 2 weeks) to avoid recurrence of pretreatment symptoms (insomnia, severe anxiety, anorexia). Abrupt discontinuance of excessive doses has sometimes resulted in vomiting, ataxia, tremors, muscle twitching and epileptiform seizures. Prescribe very cautiously and in small amounts for patients with suicidal tendencies. Suicidal attempts have resulted in coma, shock, vasomotor and respiratory collapse and anuria. Excessive doses have resulted in prompt sleep; reduction of blood pressure, pulse and respiratory rates to basal levels; and occasionally hyperventilation. Treat with immediate gastric lavage and appropriate symptomatic therapy. (CNS stimulants and pressor amines as indicated.) Doses above 2400 mg./day are not recommended.

Composition: Tablets, 200 mg. and 400 mg. meprobamate. Coated Tablets, WYSEALS® EQUANIL (meprobamate) 400 mg. (All tablets also available in REDIPAK® [strip pack], Wyeth.) Continuous-Release Capsules, EQUANIL L-A (meprobamate) 400 mg.

Wyeth Laboratories Philadelphia, Pa.

Equanil®
(meprobamate) Wyeth®



Man in space, now fait accompli, re-emphasizes the importance of Uro-Phosphate therapy. Research into the effect of space travel on the astronaut reveals that weightlessness causes loss of bone calcium. As the bones are required to bear less and less of the weight of the body they lose calcium, increasing the calcium content of the urine. When physical activity is reduced, the acidity of the urine should be adjusted to keep increased calcium in solution . . . . a prophylaxis to prevent kidney or bladder calculi.

Uro-Phosphate®

NOW A SUGAR-COATED TABLET

Each tablet contains: METHENAMINE, *300 mg.;* SODIUM ACID PHOSPHATE, *500 mg.*

Uro-Phosphate gives comfort and protection when inactivity causes discomfort in the urinary function. It keeps calcium in solution, preventing calculi; it maintains clear, acid, sterile urine; it encourages complete voiding and lessens frequency when residual urine is present.

Uro-Phosphate contains sodium acid phosphate, a natural urinary acidifier. This component is fortified with methenamine which is inert until it reaches the acid urinary bladder. In this environment it releases a mild antiseptic keeping the urine sterile.

Uro-Phosphate is safe for continuous use. There are no contra-indications other than acidosis. It can be given in sufficient amount to keep the urine clear, acid and sterile. A heavy sugar coating protects its potency.

Dosage:

For protection of the inactive patient 1 or 2 tablets every 4 to 6 hours is usually sufficient to keep the urine clear, acid and sterile.

2 tablets on retiring will keep residual urine acid and sterile, contributing to comfort and rest.

A clinical supply will be sent to physicians and hospitals on request.

WILLIAM P. POYTHRESS & COMPANY, INC., RICHMOND, VIRGINIA 23217

Manufacturers of Ethical Pharmaceuticals

Proposed Drug Program Under Title XIX Maine Department Of Health And Welfare, Bureau Of Medical Care

Julie A. Brous, M.D.*

Recognizing that illness may foster and intensify financial and personal dependency, the Department of Health and Welfare attempts to assure availability of quality medical care to public assistance recipients, so that health need not be limited to financially more fortunate peoples. Drugs have long been a necessary part of medical care. Perceiving this importance, the 104th Legislature of the State of Maine appropriated funds to provide drugs for the public assistance recipient under Title XIX.

Our problem has been to determine how, with a limited amount of funds available, we can provide the most vital drugs to these people and stay within the budget allowed us.

In seeking the experience of other states, we found that the cost per eligible recipient per year varied considerably from $18.53 to $53.52 but that New Hampshire seemed to have a rather average figure of $36.08. Knowing this, it was apparent that we would need some form of limitations in the program in order to control costs.

Possible means of doing this were use of a restrictive formulary, generic prescribing, limiting types of drugs, excluding over-the-counter drugs, and imposing a dollar limit per recipient. The study of a Task Force on Prescription Drugs in 33 states reported that the use of a formulary did not lower costs, but, in fact, the highest average annual expense was experienced by states with the most restrictive formularies. It suggested controlling costs through the use of general exclusions or dollar limits. We felt that dollar limits for each recipient would be nearly prohibitive to administer effectively. Generic prescribing was felt to be unacceptable to the state's practitioners and was excluded. This left limiting the types of drugs by broad categories.

R. A. Gosselin's National Prescription Audit gave the following data on relative volumes and costs of different drug categories:

Prescription Volume	*1968 Ave/Prescription*
1. Antibiotics	$4.53
2. Hormones	3.67
3. Ataractics (tranquilizers)	4.96
4. Cough and Cold Preparations	2.55
5. Analgesics (including Narcotics)	2.89
6. Cardio-vascular Preparations	4.24
7. Sedatives and Hypnotics	2.18
8. Diuretics	3.91
9. Vitamins	(none given)
10. Antispasmodics	3.55

Using this information and attempting to control costs, the Sub-committee on Drugs of the Medical Advisory Committee made the following recommendations:

A. *Exclusions:*

Antibiotics
1. Exclude combinations of antibiotics.
2. Suggest generics in certain classes of drugs. Supply physicians with comparative price lists.

Hormones
1. Exclude necessity for refill prescriptions of insulin.

Ataractics
1. Exclude ataractics other than barbiturates and chloral hydrate.
2. Require prior authorization for high-cost ataractics (e.g. Thorazine®) required when barbiturates are not indicated.

Cough and Cold Preparations
1. Exclude cough and cold medicines.

Analgesics
1. No exclusions.

Cardio-vascular Preparations
1. No exclusions.

Diuretics
1. No exclusions.

Vitamins
1. Exclude vitamins.

Antispasmodics
1. No exclusions.

Other Medications
1. Exclude over-the-counter drugs or items.
2. Generic equivalents may be prescribed by a physician, but may *not* be substituted by a pharmacist.
3. Exclude injectables when oral medication is available for equally effective treatment but permit prior authorization for exceptional reasons.
4. Exclude weight-control drugs.
5. Prior authorization required for prescriptions costing over $10.

B. *Prescription Writing:*
1. There shall be a written prescription for every

*Acting Director, Bureau of Medical Care.

TABLE 1

EXAMPLES OF COMPARATIVE DRUG COSTS

*Achromycin® 250 mg	$11.22	Pfizer Tetracyn® 250 mg	$4.25
		Squibb Sumycin® 250 mg	3.85
Pentids® 200,000 Units	5.25	Pfizer Penicillin Potassium	
400,000 Units	8.45	200,000 Units	2.20
		400,000 Units	2.70
Meticorten® 5 mg	10.80	Upjohn Deltasone® 5 mg	2.25
Serpasil® 0.25 mg	4.50	Upjohn Reserpoid	2.55
Reserpine®, USP 0.25 mg.	.82	Lilly Sandril	1.05
Achromycin® Syrup 60 cc	1.18	Pfizer Tetracyn Syr. 60 cc	.60
Librium® 10 mg.	7.12	Squibb Sumycin Syr. 60 cc	.90
Phenobarbital 30 mg.	.27		

*Costs per 100

drug. Every prescription must be signed by a physician.

2. The pharmacist will be permitted to fill out the proper prescription invoice if the physician does not use the proper form when prescribing or if the physician phones the prescription. A form signed by the physician must be obtained within three days.
3. Physicians will use their own prescription blanks.
4. Every prescription written by a physician must carry specific directions for the patient. None are to be indicated: "as directed" or "PRN."
5. With the exception of general exclusions, there will be a free choice of medication by the physician with no so-called formulary in effect.
6. All prescriptions must be dispensed to the patient within thirty days of the date prescribed.
7. The maximum non-maintenance prescription drugs shall be a thirty-day supply.
8. The maximum on maintenance drugs shall be up to a ninety-day supply, with maximum of refills up to three months and these must be ordered by the physician. No injectable preparation when oral preparation is available.

C. *Dispensing:*

1. All licensed pharmacies will be eligible to participate in the drug program.
2. No medication will be dispensed by a physician to a welfare patient with expectation of payment from the state. Application can be made for the privilege to dispense in areas where no pharmacy service is available.
3. In no instance should the charge to the state be higher than the charge made to the general public clientele.
4. The pharmacist is required to place the name of the manufacturer of the drug dispensed on the face of the prescription invoice.
5. Pharmacies must submit invoices to the state no later than sixty days following the month the prescription is dispensed. However, daily, weekly, or bi-weekly billings are recommended.

As increased funds become available, our plans are to expand the provisions of the program. Meanwhile, we shall tentatively plan to initiate the program January 1, 1970, under the preceding policies.

The Department encourages practitioners to aid in controlling costs for this service through the AMA-endorsed recommendation for "emphasis on the use of U.S.P., N.F., N.D., and A.D.R. counterpart drugs of equal therapeutic effectiveness when available, when the quality of product is assured, and when a price differential exists."

SUMMARY

January 1, 1970, the State of Maine Department of Health and Welfare, under the Title XIX or Medicaid program (aid to the categorically needy or aid to the aged, blind, disabled and AFDC children and adults) will provide prescription drugs to its recipients. Because of economic limitations, a number of types of drugs will be *EXCLUDED*. They are:

1. Combination antibiotics.
2. Vitamins.
3. Cough and cold preparations.
4. Tranquilizers other than barbiturates and chloral hydrate. (Barbiturates and chloral hydrate *will* be provided.)
5. Over-the-counter items.
6. Weight control drugs.

Prior authorization for exceptions to these and for prescriptions costing over $10 is required. There will be a 30-day limit to supply of non-maintenance drugs and 90-day limit to supply of maintenance drugs.

AMERICAN CANCER SOCIETY - MAINE DIVISION, INC.

Brunswick, Maine

International Cancer Fellowship Grants Announced

NEW YORK, N. Y. — American Cancer Society-Eleanor Roosevelt International Cancer Fellowship grants totalling $207,600 will enable scientists from 14 foreign nations — including East European countries — and the U. S. to participate in significant cancer research projects in 1969-70.

Nineteen grants, announced recently, will support work in immunology, virology, radiation carcinogenesis, chemotherapy and molecular biology. Financed by the American Cancer Society, the fellowship program is administered by the International Union Against Cancer, headquartered in Geneva, Switzerland.

Each fellow is required to have a doctorate or its equivalent from a recognized institution. Each works with, or under, an outstanding scientist in another country for the term of the grant.

For example, a 51-year-old Czechoslovak senior scientist, who has never worked abroad previously, was awarded a grant applicable at the National Cancer Institute in Maryland. A woman scientist who established an immunology laboratory in Romania despite difficulties was given a fellowship to pursue her ideas in Philadelphia. An international panel of distinguished scientists selected grant recipients.

Nine of the 19 grants for 1969-70 will be applied at U.S. institutions; the remainder will be used in England, France, Sweden and West Germany. In addition to providing a special type of worldwide exchange and communication, the grants offer an opportunity for uninterrupted research in an environment remote from usual day-to-day responsibilities. Both the fellow and his host laboratory benefit. The stimulation is carried back to the home laboratory.

The current grants range from $2,500 to $19,000 depending on the amount of salary received from the home institution. Fellowships include traveling expenses for fellows and their dependents.

The number of scientists who have received American Cancer Society-Eleanor Roosevelt International Cancer Fellowships now totals 171 since the program was inaugurated in 1961.

The following list of 1969-70 Fellows indicates the diversity of nations and host institutions:

Roy Albert, M.D. (U.S.) to Institute of Cancer Research, Surrey, England;
Ladislav Bahna, M.D. (Czechoslovakia) to National Cancer Institute, Bethesda, Md.;
Pasquale Grippo, M.Sc. (Italy) to Harvard Medical School, Boston;
Ivo Hlozanek, D. Vet. Med. (Czechoslovakia) to Houghton Poultry Research Station, Huntingdon, England;
Leslie Hughes, F.R.C.S. (Australia) to University of Pittsburgh, Pa.;
Andrew Jeney, M.D. (Hungary) to University of Heidelberg, West Germany;
Alberto Macario, M.D. (Argentina) to Karolinska Institutet, Stockholm, Sweden;
Rauno Mantyjarvi, M.D. (Finland) to Milton S. Hershey Medical Center, Hershey, Pa.;
Donald Marcus, M.D. (U.S.) to Chester Beatty Research Institute, London, England;
Lars Martensson, Ph.D. (Sweden) to Salk Institute, La Jolla, Calif.;
Vijai Nigam, M.Sc., Ph.D. (Canada) to Max Planck Institute, Goettingen, West Germany;
Joyce Papadimitriou, Ph.D. (Greece) to Imperial Cancer Research Fund, London, England;
Gerard Quash, B.Sc. (Jamaica) to Institute Gustave Roussy, Villejuif, France;
Wolfgang Rapp, M.D. (West Germany) to Stanford University, Palo Alto, Calif.;
Phillip Robbins, Ph.D. (U.S.) to Imperial Cancer Research Fund, London, England;
Leon Rosenberg, Ph.D. (U.S.) to Karolinska Institute, Stockholm, Sweden;
Nicole Suciu-Foca, B.Sc. (Romania) to Wistar Institute, Philadelphia, Pa.;
Rolf Seljelid, M.D. (Norway) to Rockefeller University, New York City;
Takahiro Uchida, M.D. (Japan) to Salk Institute, San Diego, Calif.

American Cancer Society News Service Release.

Necrologies

C. Harold Jameson, M.D.

1893-1969

C. Harold Jameson, M.D., 75, of Camden, Maine, a Past President of the Maine Medical Association, died on August 2, 1969. He was born in Thomaston, Maine on October 27, 1893, son of William J. and Harriet F. Jameson.

Dr. Jameson was graduated from Thomaston High School in 1912, Harvard College in 1916 and received his medical degree from Harvard Medical School in 1919. He interned at the Union Hospital in Fall River, Massachusetts and for three years was a surgical and urological resident at the Peter Bent Brigham Hospital in Boston. He practiced gynecological surgery at the Free Hospital for Women in Brookline, Massachusetts for several months. He did clinical pathology at the Bar Harbor hospital in the summers of 1921-1922. Dr. Jameson practiced General Surgery in Rockland, Maine from 1922 until his recent retirement.



Dr. Jameson was an honorary member of the Knox County Medical Society and the Maine Medical Association, having received a fifty-year pin at the June 1969 annual session. He was also a member of the American Medical Association, the American College of Surgeons, the New England Surgical Society and the New England branch of the American Urological Society. He was a past president of the Maine Tuberculosis Society, was Chief of the Knox County General Hospital surgical staff for many years and served as a member of the consulting staff at Camden Community, Waldo County, Thayer and Miles Memorial Hospitals.

Surviving are his widow, Priscilla Brewster Jameson of Camden; two sisters, Mrs. Stanley Maynard and Mrs. Forrest Maynard, both of Milton, Massachusetts; two sons, Bradford Jameson of Doylestown, Pennsylvania and Brewster Jameson of Menoham, New Jersey; five grandchildren; a cousin, Mrs. Ruth Dow of Tenants Harbor and two nephews.

Magnus F. Ridlon, M.D.

1898-1969

Magnus F. Ridlon, M.D., 71, of Bangor, Maine died on July 17, 1969. He was born in Stetson, Maine on March 7, 1898, son of Stillman J. and Ella Quimby Ridlon.

Dr. Ridlon was graduated from the Maine Central Institute in 1917, Bowdoin College in 1922, attended Western Reserve Medical School and received his medical degree from the University of Cincinnati College of Medicine in 1927. He interned and served a residency at the Lakeside Hospital in Cleveland, Ohio. Dr. Ridlon practiced in Bangor from 1929 until his retirement in September 1968.

He was a member of the Maine Medical Association, a past president of the Penobscot County Medical Association, a member of the American Medical Association, the New England Surgical Society, the New England Obstetrical and Gynecological Society, the Maine Cancer Society and a fellow of the American College of Surgeons. Dr. Ridlon was also a past president of the Eastern Maine General Hospital staff.

Surviving are his widow, Mrs. Marie Clark Ridlon of East Hampden; two sons, Dr. Herrick C. of West Hartford, Connecticut and Dean E. of Needham, Massachusetts; two grandsons and a granddaughter.

William B. Grow, M.D.

1904-1969

William B. Grow, M.D., 64, of China, Maine died on July 27, 1969. He was born in Newport, Vermont on October 3, 1904, son of Archie R. and Lillian M. Riches Grow.

Dr. Grow was graduated from Middlebury College in Vermont and received his medical degree from Harvard Medical School in 1930. He took postgraduate courses at the Knoxville General Hospital in Tennessee.

Dr. Grow was head of the Central Maine Sanitarium in Fairfield for eighteen years and in 1965 moved to China when he retired.

Dr. Grow was a member of the Somerset County Medical Society and the Maine Medical Association. He was also a member of the American Medical Association, the American College of Chest Physicians and the American Thoracic Society.

Surviving are his wife and two daughters.

John E. Burke, M.D.

1920-1969

John E. Burke, M.D., 48, of Bangor, Maine died on August 13, 1969. He was born in Bangor, Maine on October 24, 1920, son of Martin W. and Frances Webber Burke.

Dr. Burke attended Bangor schools, was graduated from the University of Maine in 1942 and received his medical degree from Temple University School of Medicine in 1949. He took postgraduate courses at the Temple University Hospital from 1949 to 1950, the St. Elizabeth Hospital in Youngstown, Ohio from 1950 to 1951 and from 1953 to 1956. He served in the U. S. Army during the Korean War. In 1956, Dr. Burke located in Bangor where he started his practice.

Dr. Burke was a member of the Penobscot County Medical Association and the Maine Medical Association.

Surviving are four daughters, Patricia Ann, Constance E., Aimee T. and Mary Jane, all of Bangor; two sons, John E., Jr. and Matthew J., both of Bangor; two brothers, D. Frank of Bangor and Dr. Paul W. of Newport; a sister, Mrs. Mary F. Bourneuf of Barre, Vermont; several nieces and nephews.

Carl G. Dennett, M.D.

1891-1969

Carl G. Dennett, M.D., 78, of Saco, Maine died on August 25, 1969. He was born in Saco, Maine on May 5, 1891, son of Dr. Loren and Marie Kettenbeil Dennett.

Dr. Dennett was graduated from Thornton Academy and received his medical degree from Bowdoin Medical School in 1915. He interned at the Maine General Hospital in Portland.

Dr. Dennett practiced in Unity in 1916 and then served in the U. S. Army. In 1920, he located in Saco where he was on the medical staff of the Webber Hospital and served as chief of staff for over 30 years.

He was an honorary member of the York County Medical Society and the Maine Medical Association, having received a 50-year pin in 1965.

Surviving are three daughters, Mrs. Thomas D. Cunningham of Nashua, New Hampshire, Mrs. Frederick Brandenburg of Denver, Colorado and Mrs. Dean Martin of Suffield, Connecticut; a sister, Miss D. Thea Dennett of Saco and eight grandchildren.

Donald H. Horsman, M.D.

1919-1969

Donald H. Horsman, M.D., 50, of Auburn, Maine died on September 9, 1969. He was born in Worcester, Massachusetts on April 6, 1919, son of Hiram L. and Everil Pinkham Horsman.

Dr. Horsman attended Grafton, Massachusetts schools, Hebron Academy and was graduated from Bowdoin College in 1942. He served in the Army from 1942 to 1945. Dr. Horsman attended Boston University and received his medical degree from New York Medical College in 1952. He served his internship at the Central Maine General Hospital in Lewiston from 1952 to 1953.

Dr. Horsman located in Lewiston in 1952 and had been associate physician at Bates College since 1953. He was a member of the Androscoggin County Medical Association, the Maine Medical Association and the American Academy of General Practice.

Surviving are his widow, the former Ruth Higgins; three sons, Peter, Philip and John; his mother of Auburn; and a brother, Lionel of Cazenovia, New York.

News, Notes and Announcements

Dr. Wood Receives Roselle W. Huddilston Award

George W. Wood, III, M.D., of Bangor, was awarded the Roselle W. Huddilston Medal for his "distinguished service and outstanding contributions in the field of health to the people of the State of Maine" at the annual meeting of the Maine Tuberculosis and Health Association held at Bangor on October 8.

Presentation of the Huddilston Medal was made to Dr. Wood for the state TB and Health association by Brinton T. Darlington, M.D., of Augusta, who was the 1968 recipient of the Huddilston award.

In his citation of Dr. Wood, Dr. Darlington stated: – "Deep concern for and constant effort in behalf of the health and well-being of his fellow citizens is the major personal characteristic of Dr. George W. Wood, III. His concepts and his goals are determined by compassion. In seeking them he is dedicated, constant and perservering. He has gained everyone's respect and is a leader in medical and community affairs."

The Roselle W. Huddilston Medal has been awarded annually by the Maine Tuberculosis and Health Association for the past twelve years, with Dr. Wood being the seventh physician to receive the award.

Besides carrying on an active medical practice in Bangor, Dr. Wood has served as the volunteer medical director of the Bangor-Brewer Tuberculosis and Health Association for the past fifteen years. He has also served for many years on the Hospital and Health Advisory Committee of the City of Bangor, was president of the Eastern Maine General Hospital medical staff, and is currently a member of St. Joseph Hospital's long range planning committee. He is a past president of the Maine Tuberculosis and Health Association and the Maine Thoracic Society, and has served on the Council of the Maine Medical Association. Currently, he serves as a member of the Board of Directors of both the Maine Heart Association and the Maine Tuberculosis and Health Association, and as a member of the City of Bangor School Committee.



Dr. Wood, left, receiving Huddilston Award from Dr. Darlington.

County Society Notes

HANCOCK

A meeting of the Hancock County Medical Society was held at the Brookside Restaurant in Ellsworth, Maine on September 10, 1969 with nine members and five guests present.

A letter from Dr. Tompkins of the Children's Bureau in Washington, D.C. was read concerning the Maternal and Infant Care Program. Dr. Tompkins had met with the Society at a special meeting June 18 in Ellsworth. His letter advises that the Maternal and Infant Care Program in the State of Maine is undergoing a process of reassessment of continued operation.

A Maine Medical Association letter regarding the Maine Medical Education Foundation addressed to the Society from Ferris S. Ray, M.D. was read by Robert F. Russell, M.D. and commented upon favorably by him.

Dr. Russell appraised the members of a recent effort by the Maine Medical Association's Council Chairman, Linus J. Stitham, M.D. and George W. Wood, III, M.D. and himself to review the aims of the Association so that a more active and effective role might be possible at the present and near future critical time of reshaping medical practice. A preliminary outline has been made. Further word on progress of this effort will be coming.

The Comprehensive Health Care Committee approved by the Society at the May 1969 meeting was formed by Dr. Stewart as follows: Membership – presidents of the staff of hospitals of

Hancock County, president of the Society and secretary of the Society. Meetings – one in October and one in February.

Joseph B. Kiel, M.D. of Columbia Falls was introduced to the Society as the consulting psychiatrist for Area 2, Hancock and Washington County. He is associated with the Bangor Guidance Center.

Dr. John Van Pelt's application for membership was accepted.

Roy Patten, M.D., who has practiced internal medicine in Bangor since June 1969, and who has a special interest and training in hematology and cancer chemotherapy, gave a talk entitled Chemotherapy and the Community. The community physician should be enabled to participate in chemotherapy of cancer with the advice and support of the medical center physicians' expertise. Thus many more patients can be treated and remain at home with the family physician fully informed of the patients care, Dr. Patten believes. His remarks were well taken as was evidenced by the discussion which followed his presentation.

BRADLEY E. BROWNLOW, M.D., *Secretary*

Letter to the Editor

To the Editor:

This letter is written to you because of your interest in the funding of medical scholarships. Can you help me find 199 American physicians who have seen their own children achieve academic fulfillment and would now like to help the worthy children of their less fortunate neighbors become doctors?

I have established The Dr. and Mrs. Benjamin Lee Gordon Memorial Scholarship in the memory of my late parents. My mother, Mrs. Dorothy Gordon, was the greatest inspiration of my life. She died in 1955 at the age of 75. My father, Dr. Benjamin Lee Gordon, was not only a noted medical historian, author and ophthalmologist, but a father who was a rock of strength at all times. He died in 1965 at the age of 94.

The Dr. and Mrs. Benjamin Lee Gordon Memorial Scholarship is unique in various aspects. The Scholarship consists of $5,000 which is awarded to one Atlantic County individual (male or female) on the basis of a combination of financial need and academic merit to enable the recipient to afford a complete medical education.

The Dr. and Mrs. Benjamin Lee Gordon Memorial Scholarship is an outright gift free of all strings and encumbrances. The $5,000 is divided into four yearly stipends. The recipient undertakes no indebtedness and no repayment is permitted. The scope of his future practice remains entirely at his own discretion.

The Dr. and Mrs. Benjamin Lee Gordon Memorial Scholarship is awarded by the Scholarship Committee of the Atlantic County Medical Society and is administered by the Atlantic County Medical Society.

For a county medical society to be able to accept such scholarship gifts on a tax-deductible basis, it must form a special tax-exempt charitable corporation acceptable to the Internal Revenue Service. The Atlantic County Medical Society has graciously accomplished this by forming the Atlantic County Medical Society Scholarship Fund, Inc.

It is to be emphasized that county medical scholarships of the type under discussion in no way supersede the wonderful work being done by the A.M.A.-E.R.F. and other national organizations. They rather constitute an effort to round out the medical scholarship picture on a local level. After all, these are the days of resurgence of interest in local efforts to solve the problems of our society. It should be a source of great satisfaction to not only support the rather anonymous needs of the profession as a whole on a national level but to actually aid and witness at close range the development of a new physician – a real flesh and blood human being.

As an added bonus, such county medical scholarships could in a small but effective way tend to ameliorate the physician shortage in the area of the donor, although this, of course, is not of primary importance and no recipient would be asked to guarantee the geographic area of his practice. The primary effect would be secured by present physicians helping future physicians to the benefit of our total society.

I am seeking another 199 physicians in the United States, who have raised their own children but still are deriving excellent incomes from their practices, who would like to establish $5,000 scholarships controlled by their county medical societies and thus help children of less fortunate area residents become physicians. It is understood that the awarding of such scholarships on a yearly basis would be contingent on the continuation of each donor's financial prosperity and his satisfaction with the fair way in which the awards are handled.

I would deem it an honor to award a "Certificate of Meritorious Service to the Future of Medicine in America," each personally inscribed and suitable for framing, to the first 199 physicians in the United States who may care to establish such scholarships in their local areas. The ultimate success of this venture would put the sum of one million unwasted physician-earned dollars where it would do the most good for the future medical needs of society.

Of course, *no money is to be sent to the undersigned.* A short note by an officer of the county medical society, written on official stationery, substantiating each $5,000 donation would entitle the donor to his Certificate.

Hoping that this information will be of interest to you, I am

Sincerely yours,
MAURICE B. GORDON, M.D.
6917 Atlantic Avenue
Ventnor, N. J. 08406

WHAT'S IMPORTANT – *Continued from Page* 285

health of the people of Maine. If we develop a thoughtful list of priorities and exercise imagination, courage and wisdom, we can evolve methods to attain these priorities. We pray this opportunity will not be lost.

GEORGE W. WOOD, III, M.D., *Chairman*
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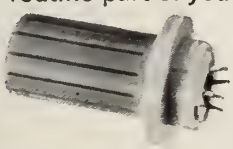
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Precautions: With a positive reaction, consider further diagnostic procedures. Use with caution in persons with active tuberculosis or known allergy to acacia. Vesiculation, ulceration, or necrosis may occur at the test site in highly sensitive persons.

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"All Interns are Alike"

It stands to reason. They all go through the same training; they all have to pass the same tests; they all have to measure up to the same standards; they all are underpaid, too. Therefore, all interns are alike.

That's utter nonsense, of course. But it's no more nonsensical than what some people say about aspirin. Namely: since all aspirin is at least supposed to come up to certain required standards, then all aspirin tablets must be alike.

Bayer's standards are far more demanding. In fact, there are at least *nine specific differences* involving purity, potency and speed of tablet disintegration. These Bayer® standards result in significant product benefits including gentleness to the stomach, and product stability that enables Bayer tablets to *stay* strong and gentle until they are taken.

So next time you hear someone say that all aspirin tablets are alike, you can say, with confidence, that it just isn't so.

You might also say that all interns aren't alike, either.



Mild ulcerative colitis may be triggered here...



In mild ulcerative colitis, a number of factors can precipitate an attack: for instance, dietary indiscretion, such as eating raw foods, or emotional overreaction, such as that aroused by financial difficulties. No matter what causes the patient's sensitive colon to "act up," he soon suffers from acute discomfort...and often, from anxiety and apprehension as well. Such patients frequently respond well to adjunctive dual-action Librax® therapy.

Librax combines, in a single convenient capsule, the well-known antianxiety effect of Librium® (chlordiazepoxide HCl) and the dependable anticholinergic / antispasmodic effect of Quarzan® (clidinium Br). Therefore, as Librax helps to relieve the patient's excessive anxiety and reduce his overreaction to stress, it also, at the same time, helps to control hypersecretion and hypermotility, thus relieving spasm and abdominal discomfort.

With Librax, the dosage schedule is simple: 1 or 2 capsules, t.i.d. or q.i.d., will in most cases bring the patient significant relief of both the emotional and physical elements that contribute to his psychovisceral disorder.

Before prescribing, please consult complete product information, a summary of which follows.

INDICATIONS: Indicated as adjunctive therapy to control emotional and somatic factors in gastrointestinal disorders.

CONTRAINDICATIONS: Patients with glaucoma; prostatic hypertrophy and benign bladder neck obstruction; known hypersensitivity to chlordiazepoxide HCl and/or clidinium bromide.

WARNINGS: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering Librium (chlordiazepoxide hydrochloride) to known addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards. As with all anticholinergic drugs, an inhibiting effect on lactation may occur.

PRECAUTIONS: In elderly and debilitated, limit dosage to smallest effective amount to preclude development of ataxia, oversedation or confusion (not more than two capsules per day initially; increase gradually as needed and toler-

or here.



ated). Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (*e.g.*, excitement, stimulation and acute rage) have been reported in psychiatric patients. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

ADVERSE REACTIONS: No side effects or manifestations not seen with either compound alone have been reported with Librax. When chlordiazepoxide hydrochloride is used alone, drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally with chlordiazepoxide hydrochloride, making periodic blood counts and liver-function tests advisable during protracted therapy. Adverse effects reported with Librax are typical of anticholinergic agents, *i.e.*, dryness of mouth, blurring of vision, urinary hesitancy and constipation. Constipation has occurred most often when Librax therapy is combined with other spasmolytics and/or low residue diet.

two good reasons for prescribing LIBRAX®

Each capsule contains 5 mg chlordiazepoxide HCl and 2.5 mg clidinium Br.

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Nutley, New Jersey 07110



No place for beginners

Terramycin®
(oxytetracycline)

An infection of rapid onset requiring prompt attention. Teenage girl with chills, fever, abdominal pain, backache and nausea. Frequent and urgent urination with burning. On examination—tenderness over kidney. Blood count and urinalysis confirm the diagnosis: acute pyelonephritis. Treatment is initiated with Terramycin. Within a few days of follow-up therapy, the patient is markedly improved. The pretreatment urine culture shows a strain of *E. coli* highly susceptible to Terramycin.

Experience has shown that Terramycin offers special advantages in treating urinary tract infections when strains of causative bacteria are susceptible. Broad-spectrum coverage unaffected by penicillinase. Effective tissue levels to help reach foci of infection in renal parenchyma. High urine levels—excreted by kidney in *active* form.

With Terramycin, you have the assurance that comes with choosing an agent physicians have depended on for over 18 years. In difficult as well as routine cases, when tests reveal susceptible organisms, consider Terramycin. One of the world's most widely used broad-spectrums.

Contraindicated: In individuals hypersensitive to oxytetracycline.

Warnings: Reduce usual oral dosage and consider antibiotic serum level determinations in patients with impaired renal function.

Use of oxytetracycline during the last trimester of pregnancy, neonatal period and early childhood may cause discoloration of developing teeth. This effect occurs mostly during long-term use of the drug, but it has also been observed in usual short-treatment courses.

During treatment with tetracyclines, individuals susceptible to photodynamic reactions should avoid direct sunlight; if such reactions occur, discontinue therapy.

Note: With oxytetracycline, phototoxicity is unknown and photoallergy very rare.

Precautions: Use of broad-spectrum antibiotics occasionally may result in overgrowth of nonsusceptible organisms. Where such infections occur, discontinue oxytetracycline and institute specific therapy. Increased intracranial pressure in infants is a possibility. Symptoms disappear upon discontinuation of therapy.

Adverse Reactions: Nausea, diarrhea, glossitis, stomatitis, proctitis, vaginitis and dermatitis, as well as reactions of an allergic nature, may occur but are rare.

Supply:* Terramycin Capsules: oxytetracycline HCl, 250 mg. and 125 mg. Terramycin Syrup: calcium oxytetracycline, 125 mg. per 5 cc. Terramycin Pediatric Drops: calcium oxytetracycline, 100 mg. per cc.

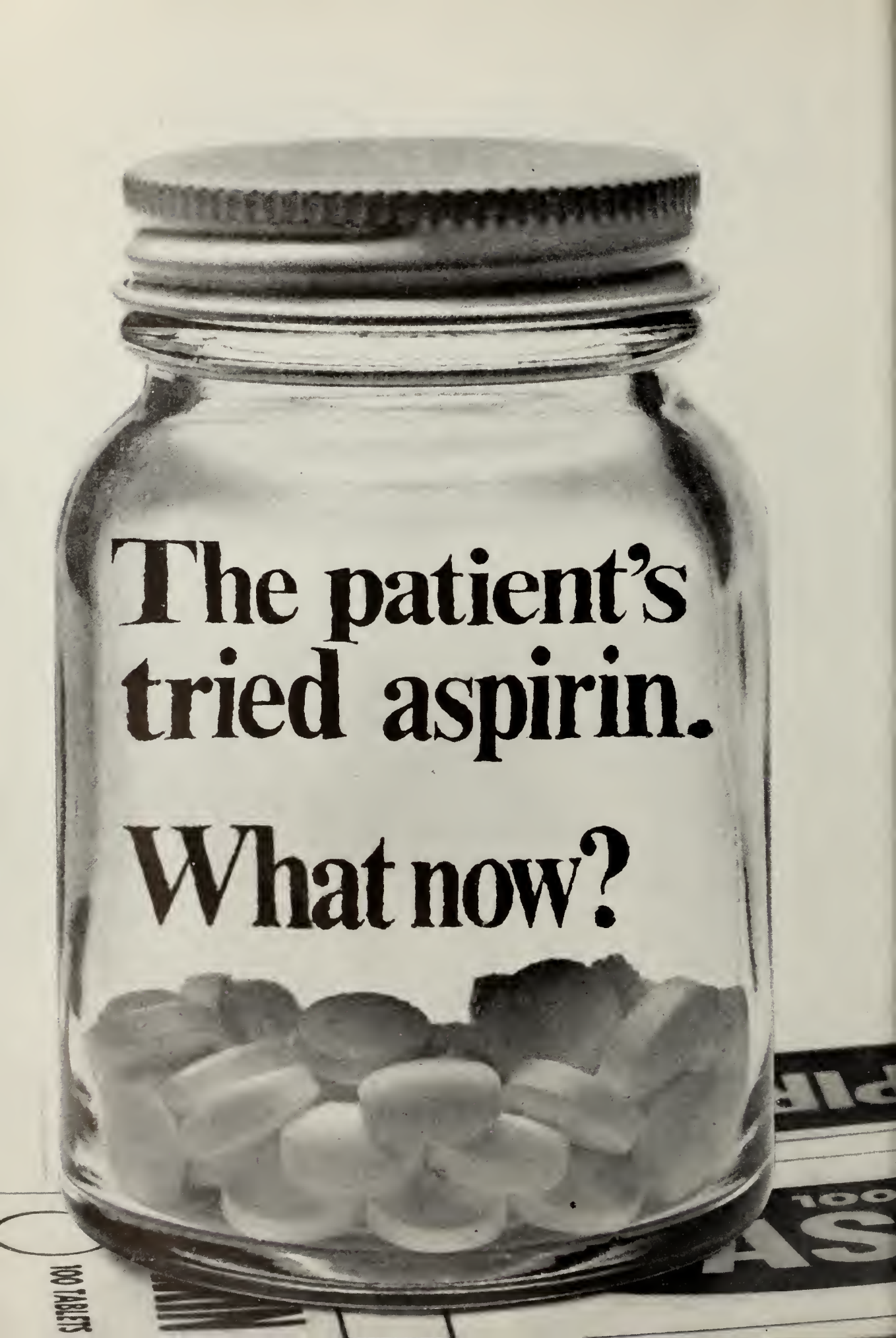
*All potencies listed are in terms of the standard, oxytetracycline.

More detailed professional information available on request.



Terramycin®
(oxytetracycline)

Pfizer LABORATORIES DIVISION
New York, N.Y. 10017


The patient's
tried aspirin.
What now?
100 TABLETS

There's a good chance your patient needs more than a non-prescription analgesic for pain relief. Especially after self-medication has failed.

Because continuing, increased pain and discomfort may in part be a reflection of anxiety, Equagesic is worthy of consideration. In a single, non-narcotic preparation, it helps relieve pain . . . *and* associated anxiety and tension.

Tablets

Equagesic®

(meprobamate and ethoheptazine citrate with aspirin) Wyeth

IN BRIEF

Contraindications: History of sensitivity or severe intolerance to aspirin, meprobamate or ethoheptazine citrate.

Warnings: USE IN PREGNANCY: Safety for use during pregnancy or lactation has not been established; therefore, it should be used in pregnant patients or women of child-bearing age only when the physician judges its use essential to the patient's welfare.

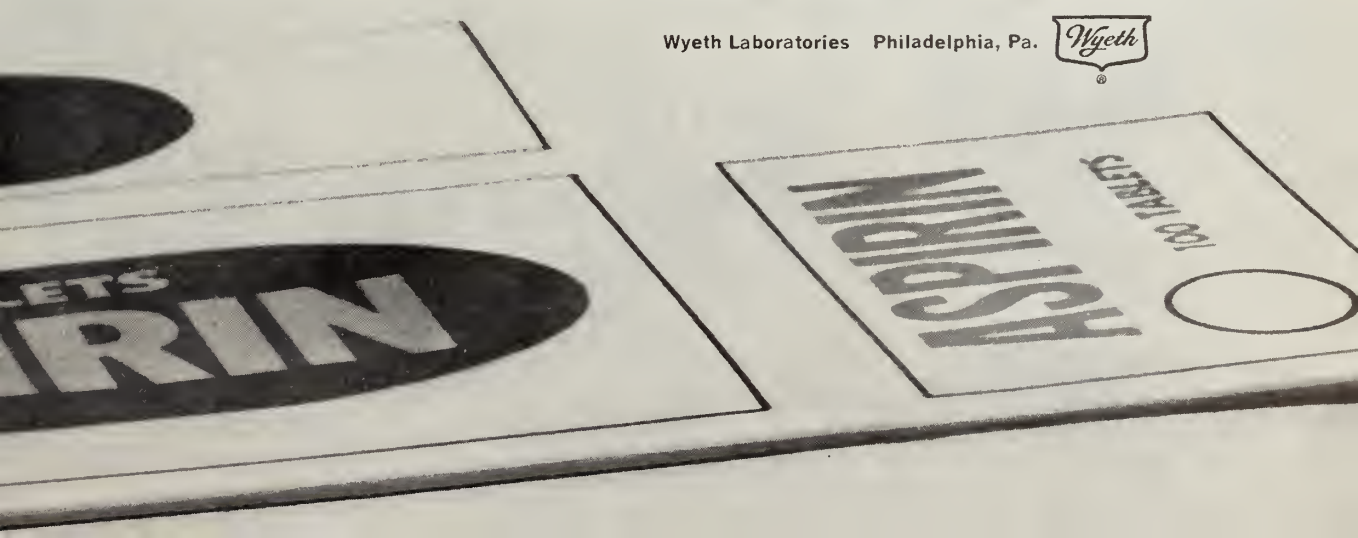
Precautions: Keep out of reach of children. Not recommended for patients 12 years old or less. Carefully supervise dose and amounts prescribed, especially for patients prone to overdose themselves. Excessive prolonged use of meprobamate in susceptible persons—as alcoholics, ex-addicts, severe psychoneurotics—has resulted in dependence or habituation. Withdraw gradually after prolonged excessive dosage to avoid possibly severe withdrawal reactions including epileptiform seizures. Warn patients of possible reduced alcohol tolerance, with resultant slowed reactions and impaired judgment and coordination. If drowsiness, ataxia or visual disturbances (impairment of accommodation and visual acuity) occur, reduce dose. If symptoms persist, patients should not operate machinery or drive. After meprobamate overdose, prompt sleep, reduction of blood pressure, pulse and respiratory rates to basal levels, and hyperventilation are reported. Give cautiously and in small amounts to patients with suicidal tendencies. Treat attempted suicide (has resulted in coma, shock, vasomotor and respiratory collapse and anuria) with gastric lavage and appropriate symptomatic therapy (CNS stimulants and pressor amines as indicated). Two instances of accidental or intentional significant overdosage with ethoheptazine and aspirin have been reported. These were accompanied by CNS depression (drowsiness and lightheadedness) but resulted in uneventful recovery. On basis of pharmacologic data, CNS stimulation could be anticipated, with nausea, vomiting and salicylate intoxication (requires induced vomiting or gastric lavage, specific parenteral electrolyte therapy for ketoacidosis and dehydration, and observation for hypoprothrombinemic hemorrhage [usually requires whole blood transfusions]).

Adverse Reactions: Ethoheptazine and aspirin may cause nausea with or without vomiting and epigastric distress in a small percentage of patients. Dizziness is rare at recommended dosage. Meprobamate may cause drowsiness, ataxia and rarely allergic or idiosyncratic reactions. These reactions, sometimes severe, can develop in patients receiving only 1 to 4 doses. Such patients may have had no previous contact with meprobamate and may or may not have an allergic history. Mild reactions are characterized by urticarial or erythematous maculopapular rash. Acute nonthrombocytopenic purpura with cutaneous petechiae, ecchymoses, peripheral edema and fever have been reported. If allergic reaction occurs, discontinue meprobamate; do not reinstitute. Severe reactions, observed very rarely, include fever, fainting spells, angioneurotic edema, bronchial spasms, hypotensive crises (1 fatal case), anaphylaxis, stomatitis and proctitis (1 case) and hyperthermia. These cases should be treated symptomatically including, when indicated, such medication as epinephrine, antihistamine and possibly hydrocortisone. A few cases of leukopenia, usually transient, have been reported on continuous use. Rarely, aplastic anemia (1 fatal case), thrombocytopenic purpura, agranulocytosis, and hemolytic anemia have been reported, almost always in presence of known toxic agents.

Overdosage: See precautions section for management of overdosage.

Composition: 150 mg. meprobamate, 75 mg. ethoheptazine citrate and 250 mg. aspirin per tablet.

Wyeth Laboratories Philadelphia, Pa. Wyeth®



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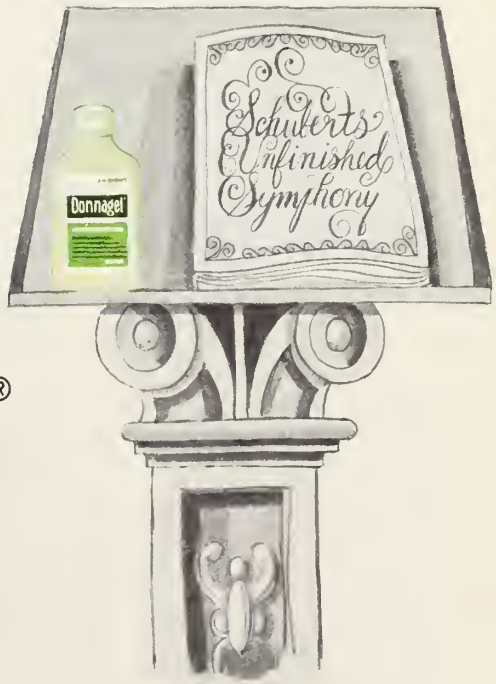




The concert was just underway,
When to the conductor's dismay
Cramps and diarrhea,
Did so quickly appear,
The maestro no longer could stay.

Because diarrhea with cramping, nausea, and painful straining can ike at the most inopportune time, it takes a comprehensive agent to treat the al diarrheal syndrome and help get the patient back on the job. That's why many physicians rely on Donnagel, especially during the fall and winter nths when "flu" and viral gastroenteritis usually hit their peak.

Donnagel is much more than just a simple kaolin-pectin combination. also contains the belladonna alkaloids to calm GI hypermotility and help lieve the distressing discomforts which so often accompany diarrhea. Certainly s less expensive and more convenient than taking two medications. And the sage is lower too. Available in the handy 4-oz. plastic bottle at pharmacies erywhere on your prescription or recommendation.



r Diarrhea and its Discomforts

Donnagel®

ach fluid ounce contains: Kaolin, 6 Gm.; Pectin, 142.8 mg.; Hyoscyamine sulfate, .1037 mg.; Atropine sulfate, 0.0194 mg.; Hyoscine hydrobromide, 0.0065 mg.; odium benzoate (preservative), 60 mg.; Alcohol, 3.8%.

A·H·ROBINS A. H. Robins Company, 1407 Cummings Drive, Richmond, Va. 23220


PHOTO BY VICTOR H


Robitussin
Robitussin-DM
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4 FL OZ.
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Cough Calmers
Cough Calmers

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THERE'S A ROBITUSSIN FOR EVERY COUGHING NEED

All the Robitussins contain gylceryl guaiacolate, an outstanding expectorant agent that greatly increases the output of lower respiratory tract fluid. Increased RTF volume exerts a demulcent effect on the tracheobronchial mucosa, promotes ciliary action, and makes thick, inspissated mucus less viscid and easier to raise.

For coughs of colds and "flu"
ROBITUSSIN®
Each 5 cc. contains:
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Non-narcotic for 6-8 hr. cough control
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Dextromethorphan hydrobromide . . . . 15.0 mg.
Alcohol, 1.4%

For unproductive allergic coughs
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Each 5 cc. contains:
Glyceryl guaiacolate . . 100.0 mg.
Pheniramine maleate . . 7.5 mg.
Codeine phosphate . . . 10.0 mg.
(warning: may be habit forming)
Alcohol, 3.5%

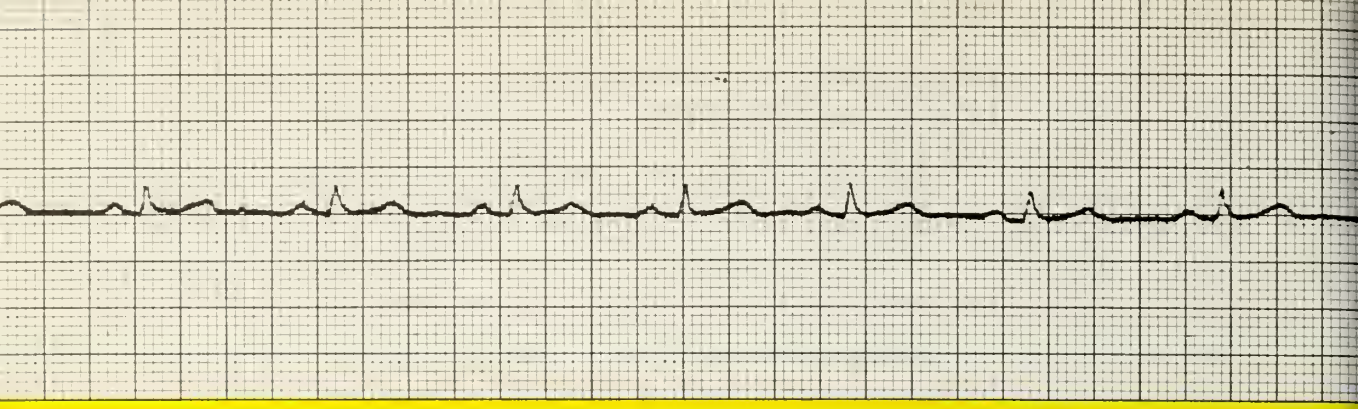
Clears sinuses and nasal stuffiness as it relieves cough
ROBITUSSIN-PE®
Each 5 cc. contains:
Glyceryl guaiacolate . . 100.0 mg.
Phenylephrine hydrochloride. . . . . 10.0 mg.
Alcohol, 1.4%

Robitussin-DM in solid form for "coughs on the go"
COUGH CALMERS™
Each Cough Calmer contains:
Glyceryl guaiacolate . . 50.0 mg.
Dextromethorphan hydrobromide . . . . 7.5 mg.

Use this handy guide to pick the right formulation for each coughing need

	Robitussin	Robitussin-DM	Robitussin A-C	Robitussin-PE	Cough Calmers
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Demulcent	●	●	●	●	●
Cough Suppressant		●	●		●
Antihistamine			●		
Long-Acting (6-8 hours)		●			●
Nasal, Sinus Decongestant				●	
Non-narcotic	●	●		●	●

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When disease is ruled out and psychic tension is implicated

Valium® (diazepam) helps relax the patient and relieve his somatic symptoms

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms have occurred following abrupt discontinuance. Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation, have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.



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Volume 60, Number 6
June, 1969

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Goodwin, Ralph A., Sr.	56 Denison St., Auburn	04210
Miller, Hudson R.	11 Turner St., Auburn	04210
Russell, Daniel F. D.	Leeds	04263
Williams, James A.	39 Pleasant St., Mechanic Falls	04256

SENIOR

Branch, Charles F.	69 Gamage Ave., Auburn	04210
Giguere, Eustache N.	90 Webster St., Lewiston	04240
Rand, Carleton H.	219 Oak St., Lewiston	04240
Sweatt, Linwood A.	48 Drummond St., Auburn	04210

AROOSTOOK COUNTY

President—Gordon N. Johnson, M.D.

Secretary—George J. Harrison, M.D.

Treasurer—Clyde I. Swett, M.D.

ACTIVE

Albert, Rodrigue J.	69 W. Main St., Fort Kent	04743
Albro, Ward A.	10 Summer St., Houlton	04730
Allison, Horace R.	555 Main St., Presque Isle	04769
Aungst, Melvin R.	Morneault Building, Fort Kent	04743
Ballard, Jeanne C.	167 Foulois Dr., Loring A.F.B., Limestone	04750
Burr, Charles G.	48 School St., Houlton	04730
Carton, Arthur K.	7 Park St., Houlton	04730
Collins, H. Douglas	Caribou Clinic, Caribou	04736
Curtin, Daniel C.	555 Main St., Presque Isle	04769
Donahue, Clement L.	22 Sweden St., Caribou	04736
Donahue, Gerald H.	4 Station St., Presque Isle	04769
Dunham, Marguerite C.	R.F.D. #1, Dresden	04342
Foy, I. Howard	Arthur R. Gould Mem. Hosp., Presque Isle	04769
Giberson, Raymond G.	156A Academy St., Presque Isle	04769
Gormley, Eugene G.	Market Square, Houlton	04730
Gregory, Frederick J.	So. Main St., Caribou	04736
Griffiths, Eugene B.	350 Main St., Presque Isle	04769
Hamlin, Paul S.	122 Academy St., Presque Isle	04769
Harrison, George J.	Market Square, Houlton	04730
Harvey, Thomas G.	59 Mayo St., Caribou	04736
Hayward, 1. Mead	So. Main St., Caribou	04736
Helfrich, Harry M., Jr.	122 Academy St., Presque Isle	04769
Higgins, George F.	122 Academy St., Presque Isle	04769
Hogan, Chester F.	62 Main St., Houlton	04730
Johnson, Gordon N.	Box 86, Houlton	04730
Johnson, R. Paul	Main St., Fort Kent	04743

Jorel, Louis E.	Box 237, Caribou	04736
Labbe, Onil B.	Van Buren	04785
MacDonald, G. Vernon A.	Box 228, Ashland	04732
Madigan, John B.	Houlton	04730
Mazerolle, Denis R.	228 Sweden St., Caribou	04736
Nicholas, Eric F.	Mars Hill	04758
Nolan, Lewis E.	Gen. Del., New Lisbon, Wis.	53950
O'Brien, William A.	Arthur R. Gould Mem. Hosp., Presque Isle	04769
Ouellette, Benoit	77 Main St., Fort Kent	04743
Page, Rosario A.	22 Sweden St., Caribou	04736
Pendleton, Arthur D.	3 Green St., Fort Fairfield	04742
Pines, Philip	Maine St., Limestone	04750
Price, Richard D.	R.F.D. 2, Caribou	04736
Proctor, Ray A.	Garden Circle, Caribou	04736
Reynolds, Arthur P.	29 Second St., Presque Isle	04769
Rideout, Samuel	Green St., Fort Fairfield	04742
Sanfacon, Philip G.	Main St., Van Buren	04785
Selmeci, Tibor G.	Hayden Ct., Woodstock, N. B., Can.	
Shahinfar, Abdol-Hamid	Cary Mem. Hosp., Caribou	04736
Smith, Carroll H.	Box 785, Presque Isle	04769
Smith, Margaret S.	Box 967, Presque Isle	04769
Somerville, Robert B.	45 Hillside St., Presque Isle	04769
Swett, Clyde I.	18 Sherman St., Island Falls	04747
Toussaint, Leonid G.	Box 9, Fort Kent	04743
White, Leland M.	18 Pleasant St., Caribou	04736
Williams, Edward P.	72 Main St., Houlton	04730
Wilson, G. Ivan	48 Court St., Houlton	04730

HONORARY

Boone, Storer W.	54 Third Ave., Presque Isle	04769
Faucher, Francois J.	Grand Isle	04746
Kirk, William V.	Eagle Lake	04739

SENIOR

Brown, Stephen S.	Mars Hill	04758
Somerville, Wallace B.	Mars Hill	04758

AFFILIATE

Savage, Richard L.	4 Elm St., Fort Kent	04743

JUNIOR

MacDonald, Lewis V. A.	Mary Hitchcock Mem. Hosp., Hanover, N.H.	03755

SERVICE

Harvey, William C.	1909 Sioux, Glendale, Ariz.	85301

CUMBERLAND COUNTY

President—George F. Sager, M.D.

Secretary-Treasurer—Douglas R. Hill, M.D.

ACTIVE

Adams, Marvin C.	25 Bramhall St., Portland	04102
Agan, Robert W.	144 State St., Portland	04101
Anderson, John B.	56 Baribeau Dr., Brunswick	04011
Andrews, Anneliese M.	Maine Medical Ctr., Portland	04102
Ansell, Harvey B.	39 Deering St., Portland	04101
Applin, Hilton H.	6 Cumberland St., Brunswick	04011
Aranson, Albert	Maine Medical Ctr., Portland	04102
Asali, Louis A.	29 Deering St., Portland	04101
Bacastow, Merle S.	22 Bramhall St., Portland	04102
Bachrach, Louis	65 Baribeau Dr., Brunswick	04011
Baldini, Elio	22 Bramhall St., Portland	04102
Baldwin, Warren C.	42 Deering St., Portland	04101
Barnes, Kirk K.	Baribeau Dr., Brunswick	04011
Barron, Martin A., Jr.	37 Deering St., Portland	04101
Bearor, Robert A.	Maine Medical Ctr., Portland	04102
Bennet, Eben T.	49 Deering St., Portland	04101
Bettle, Ronald A.	32 Federal St., Brunswick	04011
Betts, Anthony	Maine Medical Ctr., Portland	04102
Bidwell, Robinson L.	31 Bramhall St., Portland	04102
Bliss, Harry A.	39 Deering St., Portland	04102
Bonney, James H.	53 Chadwick St., Portland	04102
Bove, Louis G.	233 Vaughan St., Portland	04102
Bowman, Peter W.	Box C, Pownal	04069
Branson, Sidney R.	37 Main St., So. Windham	04082
Briggs, Russell C.	Maine Medical Ctr., Portland	04102
Briggs, Winton	291-A Ocean House Rd., Cape Elizabeth	04107
Brinkman, Carl A.	50A Flaggy Meadow Rd., Gorham	04038
Broggi, Frank S.	18 Neal St., Portland	04102
Brown, Douglas H.	548 Shore Rd., Cape Elizabeth	04107
Budd, William L.	36 Federal St., Brunswick	04011
Bullington, Sunny J.	56 Baribeau Dr., Brunswick	04011
Burnett, Claude A., Jr.	59 Deering St., Portland	04101
Burnham, Harold N.	130 Main St., Gorham	04038
Burns, Robert M.	Box 151, Westbrook	04092
Capron, Charles W.	22 Bramhall St., Portland	04102
Carroll, Ronald J.	255 Western Prom., Portland	04102
Carson, Robert S.	Baribeau Dr., Brunswick	04011
Chatterjee, Manu	295 Water St., Augusta	04330
Christensen, Harry E.	South Freeport	04078
Chun, Theresa W. C.	801 North Capitol St., Washington, D. C.	20001
Ciampi, Louis A.	326 Stevens Ave., Portland	04103
Clark, Frederick B.	131 State St., Portland	04101
Clarkin, Charles P.	64 Brookside Rd., Portland	04103
Cohen, Abram J.	Smith St., Harrison	04040
Cole, Donald P.	45 Deering St., Portland	04101
Conneen, Thomas F.	131 Chadwick St., Portland	04102
Contartese, Michael	149 Main St., Freeport	04032
Cope, Sara K.	32 Deering St., Portland	04101
Cornelius, Leland R.	Hospital Dr., Bridgton	04009
Crane, Lawrence	157 Pine St., Portland	04102
Cummings, George O., Jr.	47 Deering St., Portland	04101
Cunningham, Alice N.	32 Federal St., Brunswick	04011
D'Andrea, Anthony L.	131 State St., Portland	04101
Darakjian, Ghazar H.	56 Baribeau Dr., Brunswick	04011
Darby, Alfred E., Jr.	Box C, Pownal	04069
Davidson, David	235 State St., Portland	04101
Davidson, Gisela K.	235 State St., Portland	04101
Davies, Lloyd G.	78 Main St., Fryeburg	04037
Davis, Paul V.	94 Main St., Bridgton	04009
Davy, Carmel L.	Webber Hosp., Biddeford	04005
Davy, John R.	61 Thomas St., Portland	04102
Deming, Howard R.	Maine Medical Ctr., Portland	04102
Derry, G. Hermann	690 Congress St., Portland	04102
Dienst, Stanley G.	2799 West Grand Blvd., Detroit, Mich.	48202
Dillihunt, Richard C.	7 Bramhall St., Portland	04102
Dionne, Maurice J.	Baribeau Dr., Brunswick	04011
Doby, Tibor	Mercy Hosp., Portland	04101
Dore, Kenneth E.	133 Main St., Fryeburg	04037
Douphinett, Otis J.	763 Congress St., Portland	04102
Drake, Emerson H.	18 Bramhall St., Portland	04102
Drexler, James E.	Ward Town Rd., Freeport	04032
Earnhardt, Joseph B.	55 Stroudwater St., Westbrook	04092
Elkins, Alan M.	Maine Medical Ctr., Portland	04102
Eppinger, Ernst	103 Wayside Rd., Portland	04102
Fakhery, Behzad	339 Webster St., Lewiston	04240
Ferguson, Franklin F.	22 Bramhall St., Portland	04102
Fife, James L.	65 Baribeau Dr., Brunswick	04011
Finks, Henry B.	73 Deering St., Portland	04101
Fox, Francis H.	83 West St., Portland	04102
Galen, Robert S.	6 Breckan Rd., Brunswick	04011
Geer, Charles R.	208 Vaughan St., Portland	04102
Geer, George L., Jr.	208 Vaughan St., Portland	04102
Geyerhahn, George	73 Deering St., Portland	04101
Gibbons, John F.	22 Bramhall St., Portland	04102
Givertz, Bernard	131 Chadwick St., Portland	04102
Glassmire, Charles R.	37 Deering St., Portland	04101
Godsoe, John A.	7 Bramhall St., Portland	04102
Goduti, Richard J.	9 Deering St., Portland	04101
Goldfarb, Walter B.	72 West St., Portland	04102
Good, Philip G.	38 Deering St., Portland	04101
Greco, Edward A.	12 Pine St., Portland	04102
Greco, Edward A., Jr.	12 Pine St., Portland	04102
Hallett, George W., Jr.	22 Bramhall St., Portland	04102
Hanley, Daniel F.	Box 250, Brunswick	04011
Hardy, Edmund W.	134 U.S. Rt. 1, Falmouth	04105

Hawkes, Richard S.	233 Vaughan St.,	Portland	04102
Heifetz, Ralph	173 State St.,	Portland	04101
Hiebert, Clement A.	18 Bramhall St.,	Portland	04102
Hill, Douglas R.	855 Sawyer St.,	South Portland	04106
Hinckley, Harris	331 Cottage Rd.,	South Portland	04106
Holt, C. Lawrence	41 Fox Ave., St. John's, Newfoundland,		Can.
Ines Campomanes, Carolina R.	144 State St.,	Portland	04101
Jacobson, Payson B.	295 Brighton Ave.,	Portland	04102
Johnson, Albert C.	131 Chadwick St.,	Portland	04102
Kent, Stanley W.	42 Deering St.,	Portland	04101
Knowles, John E.	131 Chadwick St.,	Portland	04102
Knowles, Robert M.	49 Deering St.,	Portland	04101
Kunkle, E. Charles	131 Chadwick St.,	Portland	04102
LaFollette, Bruce F.	157 Pine St.,	Portland	04102
Lape, C. Philip	7 Bramhall St.,	Portland	04102
Laughlin, K. Alexander	201 State St.,	Portland	04101
Leckie, Michael I.	94 Auburn St.,	Portland	04103
Leighton, Wilbur F.	192 State St.	Portland	04101
Leiter, Laban W.	175 Vaughan St.,	Portland	04102
Leonard, Lawrence M.	7 Bramhall St.,	Portland	04102
Levy, Richard A.	14 Deering St.,	Portland	04101
Libby, Harold E.	702 Main St.,	Westbrook	04092
Lincoln, John R.	22 Bramhall St.,	Portland	04102
Llorente, Aldo F.	56 Baribeau Dr.,	Brunswick	04011
Lorentz, John J.	Maine Medical Ctr.,	Portland	04102
Lorimer, Robert V.	169 State St.,	Portland	04101
Loring, William E.	144 State St.,	Portland	04101
Love, Robert B.	97 Main St.,	Gorham	04038
Lovely, David K.	46 Deering St.,	Portland	04101
Lutes, Chris A.	7 Bramhall St.,	Portland	04102
Mack, Francis X.	144 State St.,	Portland	04101
MacVane, William L., Jr.	211 State St.,	Portland	04101
Maier, Paul	723 Congress St.,	Portland	04102
Maltby, George L.	31 Bramhall St.,	Portland	04102
Marshall, Donald F.	25 Bramhall St.,	Portland	04102
Marston, Paul C.	Kezar Falls		04047
Martin, Ralf	131 Chadwick St.,	Portland	04102
Martin, Thomas A.	157 Pine St.,	Portland	04102
Matthews, Edward C.	131 Chadwick St.,	Portland	04102
Mazzone, Giovanni	499 Stevens Ave.,	Portland	04103
McAfee, Robert E.	18 Bramhall St.,	Portland	04102
McCann, Eugene C.	49 Deering St.,	Portland	04101
McCrum, Philip H.	188 State St.,	Portland	04101
McFarland, Edward A.	Baribeau Dr.,	Brunswick	04011
McGuire, Stuart W.	131 State St.,	Portland	04101
McIntire, Barron F., Jr.	13 W. Elm St.,	Yarmouth	04096
McLean, E. Allan	29 Deering St.,	Portland	04101
McManamy, Eugene P.	72 West St.,	Portland	04102
McMichael, Morton	73 Deering St.,	Portland	04101
Melkis, Andrew	Box 161,	Gray	04039
Miller, Buell A.	7 Bramhall St.,	Portland	04102
Miller, JoAnn M. H.	Reef Rd.,	Cape Elizabeth	04107
Miller, Thor	752 Main St.,	Westbrook	04092
Miniutti, Gloria M.	32 Deering St.,	Portland	04101
Minton, Paul R.	131 Chadwick St.,	Portland	04102
Monaghan, Stephen E.	7 Bramhall St.,	Portland	04102
Monkhouse, William A.	131 State St.,	Portland	04101
Morrison, Alvin A.	57 Deering St.,	Portland	04101
Morrison, Robert M.	148 State St.,	Portland	04101
Moulton, Albert W., Jr.	180 State St.,	Portland	04101
Moulton, Sumner E.	19 Deering St.,	Portland	04101
Olmsted, Burton L.	73 Deering St.,	Portland	04101
Orbeton, Everett A.	131 Chadwick St.,	Portland	04102
Osher, Harold L.	131 Chadwick St.,	Portland	04102
Ottum, Alvin E.	148 State St.,	Portland	04101
Pawle, Robert H.	251 U. S. Rt. 1,	Falmouth	04105
Pennoyer, Douglass C.	112 Vaughan St.,	Portland	04102
Penta, Walter E.	316 Woodford St.,	Portland	04103
Perkins, Niles L.	R.F.D. No. 1,	Bowdoinham	04008
Pogue, Jackson S.	529 Gilmore Ave.,	Trafford, Pa.	15085
Poliner, Irving J.	235 State St.,	Portland	04101
Polisner, Saul R.	143 Vaughan St.,	Portland	04102
Porter, Joseph E.	22 Bramhall St.,	Portland	04102
Proudian, Paul O.	776 Main St.,	Westbrook	04092
Ray, Ferris S.	7 Bramhall St.,	Portland	04102
Rerrick, Erwin G.	Box C,	Pownal	04069
Richards, A. Dewey	11 Gage St.,	Bridgton	04009
Robinson, Hugh P.	27 Deering St.,	Portland	04101
Rogers, Albert M.	157 Pine St.,	Portland	04102
Rubins, Nina B.	E. A. Center Mem. Clinic,	Steep Falls	04085
Rubins, Talivaldis	E. A. Center Mem. Clinic,	Steep Falls	04085
Sager, George F.	18 Bramhall St.,	Portland	04102
Santoro, Domenico A.	43 Deering St.,	Portland	04101
Sapiro, Howard M.	171 State St.,	Portland	04101
Saunders, Norman W.	233 Vaughan St.,	Portland	04102
Sawyer, Howard P., Jr.	22 Bramhall St.,	Portland	04102
Selvage, Irving L., Jr.	22 Bramhall St.,	Portland	04102
Shapiro, Morrill	7 Bramhall St.,	Portland	04102
Skillin, Charles E.	690 Congress St.,	Portland	04102
Sommer, Robert G.	47 Deering St.,	Portland	04101
Storer, Daniel P.	108 Fessenden St.,	Portland	04103
Strach, Toffield B. J.	3 Deering St.,	Portland	04101
Stroud, Geoffrey A.	65 Baribeau Dr.,	Brunswick	04011
Swanson, Ronald A.	Regional Mem. Hosp.,	Brunswick	04011
Swett, Alfred E.	144 State St.,	Portland	04101
Sylvester, Stanley B.	400 Congress St.,	Portland	04111
Tabachnick, Henry M.	110 Park Ave.,	Portland	04101
Taxiarchis, Louis N.	144 State St.,	Portland	04101
Taylor, William F.	134 U.S. Rte. 1,	Falmouth	04105
Telfeian, Alphonse	131 Chadwick St.,	Portland	04102
Tetreau, William J.	144 Spring St.,	Portland	04101
Thompson, Philip P., Jr.	131 Chadwick St.,	Portland	04102
Toner, Cornelius A.	634 Madison Ave.,	Albany, N. Y.	12208
Trask, Henry M.	24 Hersey St.,	Portland	04103
Turcotte, Guy N.	7 Bramhall St.,	Portland	04102
Turgeon, Raphael F.	367 Main St.,	Westbrook	04092
Turnbull, Elliott D.	Elm House,	Naples	04055
Urjanis, Janis	Pineland Hospital & Training Ctr.,	Pownal	04069
Van Deventer, Wilhelm H. J.	R.F.D. No. 1, Mere Point Rd.,	Brunswick	04011
Van Lonkhuyzen, Maurice	131 State St.,	Portland	04101
Walsh, Andrew C.	144 State St.,	Portland	04101
Ward, John V.	131 State St.,	Portland	04101
Webber, Peter B.	233 Vaughan St.,	Portland	04102
White, Chester W., Jr.	22 Bramhall St.,	Portland	04102
White, Houghton M.	56 Baribeau Dr.,	Brunswick	04011
White, William J.	1 Mitchell Rd.,	South Portland	04106
Whitney, Philip G.	233 Vaughan St.,	Portland	04102
Winkelbauer, Rudolf G.	Baribeau Dr.,	Brunswick	04011
Woodman, Arthur B.	15 Johnson Rd.,	Falmouth Foreside	04105
Wyman, David S.	233 Vaughan St.,	Portland	04102
Zolov, Benjamin	296 Congress St.,	Portland	04101

HONORARY

Blaisdell, Elton R.	233 Vaughan St.,	Portland	04102
Cummings, George O., Sr.	47 Deering St.,	Portland	04101
Fogg, C. Eugene	35 Deering St.,	Portland	04101
Freeman, William E.	107 Main St.,	Yarmouth	04096
Melnick, Jacob	261 Congress St.,	Portland	04101
Moulton, Albert W., Sr.	180 State St.,	Portland	04101
Patterson, James	1 Bay Rd.,	South Portland	04106
Petterson, Herman C.	Chebeague Island		04017
Ridlon, Joseph R.	58 South St.,	Gorham	04038
Sowles, Horace K.	413 Blackstrap Rd.,	Falmouth	04105
Thaxter, Langdon T.	Cumberland Foreside,	Portland	04110

SENIOR

Babalian, Leon	645 Congress St.,	Portland	04101
Bischoffberger, John M.		Naples	04055
Blumberg, Edward	6316 Strickland Ave.,	Brooklyn, N. Y.	11234
Casey, William L.	131 State St.,	Portland	04101
Dooley, Francis M.	53 Deering St.,	Portland	04101
Getchell, Ralph A.	14 Elmwood Rd.,	Cape Elizabeth	04107
Johnson, Oscar R.	9 Parsons Rd.,	Portland	04103
Lappin, John J.	171 State St.,	Portland	04101
Lombard, Reginald T.	793 Main St.,	South Portland	04106
O'Donnell, Eugene E.	32 Deering St.,	Portland	04101
Scolten, Adrian H.	32 Deering St.,	Portland	04101
Stevens, Theodore M.	148 State St.,	Portland	04101
Webber, Isaac M.	29 Deering St.,	Portland	04101
Whittier, Alice A. S.	143 Neal St.,	Portland	04102
Wight, Donald G.	30 Mitchell Rd.,	South Portland	04106

AFFILIATE

Asherman, Edward G.	275 Falmouth Rd.,	Falmouth	04105
Dyhrberg, Norman E.	331 Main St.,	Westbrook	04092
Huntress, Roderick L.	988 Sawyer St.,	So. Portland	04106
Sidwell-Thompson, Doris M.	R.F.D. Whittier Rd.,	W. Ossipee, N. H.	03890
Titherington, John B.	97 Brook Rd.,	Falmouth	04105

JUNIOR

Allen, Donald E. Sebago Lake 04075
Weaver, Michael L.
1011 Patrick St., Apt. 20, Flint, Mich. 48503
Sirodot, George Box 111, Independence, Iowa 50644
Stocks, Joseph F. 18 Longfellow Ave., Brunswick 04011

SERVICE

Gates, Clifford W. (CDR)
MC, USN, Naval Hospital, Camp Pendleton, Calif. 92055
Iszard, David M. 291 Ocean House Rd., Cape Elizabeth 04107
Stephenson, Richard B. Bldg. 1, Rm. 118,
National Institutes of Health, Bethesda, Md. 20014

FRANKLIN COUNTY

President—Wallace H. Duffy, M.D.

Secretary-Treasurer—Hays G. Bowne, M.D.

ACTIVE

Armstrong, Paul E. No. Main St., Kingfield 04947
Bowne, Hays G. 9A Main St., Farmington 04938
Brinkman, Harry 47 Perham St., Farmington 04938
Brinkman, Paul A. Farmington 04938
Colley, Maynard B. 14 Main St., Farmington 04938
Condit, Roger E. Box 711, Farmington 04938
Duffy, Wallace H. 100 Main St., Farmington 04938
Eastman, Charles W. 15 Millett St., Livermore Falls 04254
Ekinci, Fevzi 42 Main St., Livermore Falls 04254
Fiorica, Gaetano T. 12 Church St., Chisholm 04222
Floyd, Paul E. 2 Middle St., Farmington 04938
Gashgai, Abdollah S. Livermore Falls 04254
Pope, W. Dean 6 Pleasant St., Rangeley 04970
Reed, James W. 18 Main St., Farmington 04938
Zikel, Herbert M. High St., Wilton 04294

HONORARY

Weymouth, Currier C. Eastmont Square, Farmington 04938

HANCOCK COUNTY

President—Winston G. Stewart, M.D.

Secretary-Treasurer—Bradley E. Brownlow, M.D.

ACTIVE

Britt, Richard W. Blue Hill 04614
Brownlow, Bradley E. Blue Hill Mem. Hosp., Blue Hill 04614
Cameron, Dwight 12 Mt. Desert St., Bar Harbor 04609
Clason, Walton P. C. 12 Pleasant St., Ellsworth 04605
Coffin, Ernest L. Northeast Harbor 04662
Cooper, Llewellyn W. Hancock St., Bar Harbor 04609
English, Wesley J. Hancock St., Bar Harbor 04609
Field, Richard L. Herrick Rd., Southwest Harbor 04679
Fuller, George G. 50 Union St., Ellsworth 04605
Granger, Robert C. Blue Hill 04614
Gray, Philip L. Blue Hill 04614
Hsu, Theodore S. 14 High St., Ellsworth 04605
Isil, Neal H. 50 Union St., Ellsworth 04605
Joost, Arthur M., Jr. Box 520, Bucksport 04416
Knickerbocker, Charles H. 15 High St., Bar Harbor 04609
Kopfmann, Harry Deer Isle 04627
LaCasce, Joseph H. 50 Union St., Ellsworth 04605
Lambdin, Morris A.
Maine Coast Mem. Hosp., Ellsworth 04605
Larrabee, Charles F. 48 Mt. Desert St., Bar Harbor 04609
McIntyre, John D. 50 Union St., Ellsworth 04605
Murray, John G., Jr. Blue Hill Mem. Hosp., Blue Hill 04614
Palmer, Edward J. Maine Maritime Acad., Castine 04421
Pease, Horace B. Maine Coast Mem. Hosp., Ellsworth 04605
Russell, Robert F. Penobscot 04476
Silver, Randall H. Maine Coast Mem. Hosp., Ellsworth 04605
Stadler, Eliot T. West Gouldsboro 04687
Stewart, Nancy H. Hancock St., Bar Harbor 04609
Stewart, Winston G. Hancock St., Bar Harbor 04609
Strauss, Bella S. 50 Union St., Ellsworth 04605
Suyama, Eji 58 W. Main St., Ellsworth 04605
Thaidigsman, James H. 50 Union St., Ellsworth 04605
Thegen, W. Edward Elm St., Bucksport 04416
Torrey, Marcus A. 75 State St., Ellsworth 04605
Wilbur, Herbert T., Jr. 100 Main St., Southwest Harbor 04679
Williamson, Elizabeth E. Blue Hill 04614
Williamson, Russell G. Blue Hill Mem. Hosp., Blue Hill 04614
Wilson, Robert D. Mt. Desert Island Hosp., Bar Harbor 04609

HONORARY

Babcock, Harold S. Castine 04421

JUNIOR

Bromley, William C. Herrick Rd., Southwest Harbor 04679

SERVICE

York, Elihu (CDR) MC USN
40 Fairfield Dr., North Kingston, R. I. 02852

SERVICE AFFILIATE

Head, Rufus W. U.S.N. Activity, Winter Harbor 04693

KENNEBEC COUNTY

President—Joseph R. Crawford, M.D.

Secretary-Treasurer—Francis A. Spellman, M.D.

ACTIVE

Ashley, Alta 11 Weston St., Augusta 04330
Barnard, John M. H.
Doctors Park, 89 Hospital St., Augusta 04330
Barron, Richard E. Western Ave., Winthrop 04364
Beckerman, Stanley C. 175 Silver St., Waterville 04901
Bhatnagar, Hemendra N. 67 Silver St., Waterville 04901
Bolduc, Jean L. 173 Main St., Waterville 04901
Bourassa, Harvey J. 47 Elm St., Waterville 04901
Brann, Henry A. 31 Weston Ave., Augusta 04330
Bull, Frank B. 5 Hasson St., Hallowell 04347
Callahan, Robert L. 12 Spruce St., Augusta 04330
Canal, Ory D. 193 Cony St., Augusta 04330
Castellanos, Jose Augusta State Hosp., Augusta 04330
Chamberlin, Richard T. Thayer Hospital, Waterville 04901
Chasse, Richard L. 18 Park St., Waterville 04901
Chen, John T. Cherry Hill Ter., Waterville 04901
Ciembroniewicz, Julius E. 18 Spruce St., Augusta 04330
Cook, Aaron 23 High St., Waterville 04901
Crawford, Joseph R. 12 Spruce St., Augusta 04330
Cruickshank, Frank S., Jr. Eaton Dr., Waterville 04901
Culver, Raymond E. 14 Gilman St., Waterville 04901
Dachslager, Philip 8 Green St., Augusta 04330
Darlington, Brinton T.
Doctors Park, 89 Hospital St., Augusta 04330
Davis, Earle M. 2 School St., Waterville 04901
DeHart, Cor Thayer Hospital, Waterville 04901
Denison, John D. 105 Brunswick Ave., Gardiner 04345
Dennis, Richard H. 33 College Ave., Waterville 04901
Dole, Richard R. 218 Main St., Waterville 04901
Dore, Clarence E. 2 School St., Waterville 04901
Dunn, Robert H. Veterans Adm., Togus 04330
Emanuel, Meyer Veterans Adm., Togus 04330
Ervin, Edmund N. 2 School St., Waterville 04901
Fisher, Dean H. State House, Augusta 04330
Fisher, Samson 15 College Ave., Waterville 04901
Galarraga, Efraim C. Augusta State Hosp., Augusta 04330
Giddings, Paul D. 31 Western Ave., Augusta 04330
Giesen, Joseph H. 34 Gilman St., Waterville 04901
Gingras, Napoleon J. 6 E. Chestnut St., Augusta 04330
Goodof, Irving I. Thayer Hospital, Waterville 04901
Gould, George I. 79 Main St., Richmond 04357
Guillemette, Maurice R. 107 Water St., Augusta 04330
Guite, L. Armand, Jr. 45 Elm St., Waterville 04901
Halperin, David C. 89 Hospital St., Augusta 04330
Hayes, James C. 6 E. Chestnut St., Augusta 04330
Hiebel, Joseph J. 34 Gilman St., Waterville 04901
Hill, Anthony B. 283 Water St., Augusta 04330
Hill, Kevin 33 College Ave., Waterville 04901
Hirschberger, Celia Augusta State Hosp., Augusta 04330
Hornberger, H. Richard 2 School St., Waterville 04901
Hurd, Allan C. 5 Hasson St., Hallowell 04347
Jones, Paul A., Jr. 2 School St., Waterville 04901
Lal, Chandra P.
Regina Gen. Hosp., Regina, Saskatchewan, Can.
Landwehr, George R. 21 Western Ave., Augusta 04330
Lansing, Peter F. 16 Macomber Ave., Augusta 04330

Lepore, Anthony E. 128 Maine Ave., Gardiner 04345
Marshall, Joseph A. 177 Main St., Waterville 04901
Marshall, Paul A.
R.F.D. No. 1, Box 121A, Ridge Rd., Fairfield 04937
Mathews, Hugh J., Jr. 345 Water St., Gardiner 04345
McKendry, James R. 12 Spruce St., Augusta 04330
McLaren, John J. 31 Western Ave., Augusta 04330
McLaughlin, Clarence R. 345 Water St., Gardiner 04345
McLaughlin, Ivan E. 345 Water St., Gardiner 04345
Melendy, Oakley A.
Doctors Park, 89 Hospital St., Augusta 04330
Michaud, Joseph C. 160 Silver St., Waterville 04901
Milliken, Howard H.
R No. 1, Pond Rd., (Manchester), Hallowell 04347
Miskimins, Joseph H. 175 Silver St., Waterville 04901
Mohlar, Robert G.
Doctors Park, 89 Hospital St., Augusta 04330
Monsivais, Alfredo 1 Western Ave., Winthrop 04364
Moore, Valentine J. Thayer Hospital, Waterville 04901
Morris, Craig W.
1512 Little Horseshoe Dr., Virginia Beach, Va. 23451
Nikolaidis, Demitrios 22 Ridgewood Dr., Augusta 04330
Nolin, Laurier E. 14 Gilman St., Waterville 04901
O'Connor, Francis J. 4 Woodlawn St., Augusta 04330
Ohler, Robert L. Box 42, Veterans Adm., Togus 04330
Patterson, John C. Augusta State Hosp., Augusta 04330
Peddie, Harry M. K.
Doctors Park, 89 Hospital St., Augusta 04330
Pfeiffer, Paul H. 14 Gilman St., Waterville 04901
Plimpton, Jay R. 283 Water St., Augusta 04330
Pomerleau, Ovid F. 179 Main St., Waterville 04901
Poulin, Albert A. Cherry Hill Dr., Waterville 04901
Poulin, James E. 177 Main St., Waterville 04901
Pratt, Loring W. 177 Main St., Waterville 04901
Provost, Helen C. 48 Green St., Augusta 04330
Reynolds, John F. 216 Main St., Waterville 04901
Richards, Lee W., Jr. 21 Western Ave., Augusta 04330
Robertson, George J. 171 Harrison Ave., Boston, Mass. 02111
Rodriguez, Jose M. 109 Silver St., Waterville 04901
Rohm, Walter Augusta State Hosp., Augusta 04330
Russell, Theodore M.
Doctors Park, 89 Hospital St., Augusta 04330
Satir, Ahmet Box 682, Augusta 04330
Saunders, Allen I. Ferry Rd., R.F.D. 2, Augusta 04330
Schmidt, Lorrimer M. Veterans Adm., Togus 04330
Schumacher, William E.
14 Westwood Rd., MD "B", Augusta 04330
Schwartz, Harold J. Seton Hospital, Waterville 04901
Seligman, Morris J. Veterans Adm., Togus 04330
Senenky, Joseph P. Augusta State Hosp., Augusta 04330
Sewall, Kenneth W. 2 School St., Waterville 04901
Shaw, John H. 131 Sewall St., Augusta 04330
Sheehan, Terrance J.
Doctors Park, 89 Hospital St., Augusta 04330
Shelton, M. Tieche 21 Western Ave., Augusta 04330
Simpson, Margaret R. 2 Sea Barn Rd., Cape Elizabeth 04107
Smith, Kenneth E. Veterans Adm., Togus 04330
Sommerfeld, Kurt A. 182 Dresden Ave., Gardiner 04345
Spellman, Francis A. Veterans Adm., Togus 04330
Stinchfield, Allan J. Box 343, Augusta 04330
Stucki, Paul 72 Elm St., Waterville 04901
Sturtevant, Vaughn R. 33 College Ave., Waterville 04901
Takach, Robert J. 33 College Ave., Waterville 04901
Towne, Charles E. 18 Common St., Waterville 04901
Trembly, Bruce 33 College Ave., Waterville 04901
Turner, Fennell P. Veterans Adm. Ctr., Togus 04330
Twadelle, Frank J. 345 Water St., Gardiner 04345
Uldall, Stella L. Augusta State Hosp., Augusta 04330
Veilleux, Lucien F. 30 Elm St., Waterville 04901
Wilder, William D. Augusta State Hosp., Augusta 04330
Wilson, Robert W. Veterans Adm., Togus 04330
Wren, James C. Veterans Adm. Ctr., Togus 04330

HONORARY

Crawford, Albert S.
1960 Graefield Rd., Birmingham, Mich. 48008
Reynolds, Ralph L. 216 Main St., Waterville 04901

SENIOR

Bauman, Clair S. 159 Silver St., Waterville 04901
Goodrich, Blynn O. 45 Roosevelt Ave., Waterville 04901
Herring, Leon D. Memorial Dr., Winthrop 04364
Hill, Howard F. 33 College Ave., Waterville 04901
Langer, Ella 192 Capitol St., Augusta 04330
Marquardt, Matthias 109 Cony St., Augusta 04330
McQuillan, Arthur H. 177 Main St., Waterville 04901

AFFILIATE

Guite, L. Armand, Sr. 45 Elm St., Waterville 04901
Pomerleau, Rodolphe J. F.
Cascade Pk., Rt. 1, Waterville 04901
Reel, John J. 59 So. Front St., Richmond 04357
Sleeper, Francis H. 3 Colony Rd., Augusta 04330

JUNIOR

Hermoso, Miguel Apartado 99, Granada, Spain

SERVICE

Leadley, Peter J. Dept. of Health & Welfare, Augusta 04330

KNOX COUNTY

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Secretary-Treasurer—Richard Waterman, M.D.

ACTIVE

Apollonio, Howard L. Box 34, Rockport 04856
Brouwer, Johan 5 Beech St., Rockland 04841
Dennison, Frederick C. 3 Gillchrest St., Thomaston 04861
Earle, Ralph P. Vinalhaven 04863
Eddy, Robert H. 5 Beech St., Rockland 04841
Fuller, Barbara L. 20 Chestnut St., Rockland 04841
Hawkins, Donald B. Atlantic Ave. & Sea St., Camden 04843
Holz, Peter H. 51 Elm St., Camden 04843
Howard, Emery B., Jr. 23A Summer St., Rockland 04841
Hunter, Albert L. 45 Golder St., Lewiston 04240
Jones, Paul A., Sr. General Delivery, Union 04862
Kangas, Onni C. 417 Main St., Rockland 04841
Kibbe, Frank W. R.F.D., Lincolnville 04849
Killoran, Paul J. Knox County Gen. Hosp., Rockland 04841
King, Merrill J., Jr. 22 White St., Rockland 04841
Lathbury, Vincent T. Medical Arts Building, Rockland 04841
Lawry, Oram R., Jr. 96 Limerock St., Rockland 04841
Millington, Paul A. 44 Mountain St., Camden 04843
Morse, Edward K. 22 White St., Rockland 04841
Onat, Mustafa V. St. George 04857
Opper, Lincoln Knox Co. Gen. Hosp., Rockland 04841
Root, John A. 22 White St., Rockland 04841
Sigofoos, J. Harvey Pleasant Point 04563
Tounge, Harry G., Jr. 12 Union St., Camden 04843
Ward, William W. Box 646, Rockland 04841
Wasgatt, Wesley N. 41 Talbot Ave., Rockland 04841
Waterman, Richard Main St., Waldoboro 04572
White, Henry O. 22 White St., Rockland 04841
Williams, Thomas W. 22 White St., Rockland 04841
Woodruff, Alan F. 16 Summer St., Rockland 04841
Worthing, Verla E. Box A, Thomaston 04861

HONORARY

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Jameson, C. Harold Chestnut St., Camden 04843
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Platt, Anna Beauchamp Rd., Rockport 04856
Saunders, Sallie H. R.F.D., Camden 04843

SENIOR

Loewenstein, George
1007 Woodside Dr., Clearwater, Fla. 33516
Stimson, Barbara B. Star Route 22-282, Owl's Head 04854

AFFILIATE

Alexander, Fay K. Lincolnville 04849
Bean, Achsa M. Star Route 32, Owl's Head 04854

JUNIOR

McLellan, William A. 2701-14th Ave., Oakland, Calif. 94606

LINCOLN-SAGADAHOC COUNTY

President—Paul A. Fichtner, M.D.

Secretary-Treasurer—George W. Bostwick, M.D.

ACTIVE

Akar, Hamdi 17 Grove St., Bath 04530
Andrews, John, F. 67 Oak St., Boothbay Harbor 04538

Avantaggio, Frank O., Jr.	Bristol Rd., Damariscotta	04534
Belknap, Samuel L.	Damariscotta	04543
Blackburn, Nelson P.	Bath Memorial Hosp., Bath	04530
Bostwick, George W.	Box 388, Newcastle	04553
Burden, Charles E.	1 North St., Bath	04530
Doble, Miriam	990 Washington St., Bath	04530
Dorogi, Louis V.	Old Post Rd., Rt. 138, Bowdoinham	04008
Dougherty, John F.	112 Front St., Bath	04530
Evans, Richard, III	781 High St., Bath	04530
Fichtner, Paul A.	781 High St., Bath	04530
Gregory, Philip O.	St. Andrews Hosp., Boothbay Harbor	04538
Griffin, Carl R., Jr.	61 Atlantic Ave., Boothbay Harbor	04538
Holt, Alfred T.	Bath Mem. Hosp., Bath	04530
Hudson, Henry A.	138 Atlantic Ave., Boothbay Harbor	04538
Keating, Anthony J.	10 Oak Grove Ave., Bath	04530
Kinder, Edward L., Jr.	1027 Washington St., Bath	04530
Oceretko, Arkadij	37 Court St., Bath	04530
Powell, Ralph C.	Damariscotta	04543
Proctor, Thomas E.	Boothbay Harbor	04538
Smith, Jacob	118 Front St., Bath	04530
Smith, James O.	118 Front St., Bath	04530
Smith, Joseph I.	118 Front St., Bath	04530
Tracy, Mary J.	Bristol Rd., Damariscotta	04543
Winchenbach, Francis A.	910 Washington St., Bath	04530
Zeller, Alan W.	Main St., Newcastle	04553

HONORARY

Dalrymple, Sidney C.	So. Great Rd., So. Lincoln, Mass.	01751
Kershner, Warren E.	57 Green St., Bath	04530

SENIOR

Sherman, Fuller G.	Spruce Pt., Boothbay Harbor	04538

AFFILIATE

Bachulus, John M.	3 Breckan Rd., Brunswick	04011
Fite, Marcia	Pemaquid Point	04558
Hamilton, Virginia C.	South Harpswell	04079
Wilson, Harry M.	944 Middle St., Bath	04530

JUNIOR

Conner, William W.	Univ. of Miami Medical Ctr., Miami, Fla.	33152
Marc, Joseph A.	340 E. 34th St., New York, N.Y.	10016
Stetkevych, Alexander G.	12 Meyers Crt., Colony, Albany, N.Y.	12200

OXFORD COUNTY

President—Walter G. Dixon, M.D.

Secretary-Treasurer—Hagop Halladjian, M.D.

ACTIVE

Aucoin, Peter B.	151 Franklin St., Rumford	04276
Bean, H. Richard	241 Main St., Norway	04268
Conway, Kevin	Rumford Com. Hosp., Rumford	04276
Dixon, Walter G.	16 Deering St., Norway	04268
Egan, John F.	Saddleback Rd., Rangeley	04970
Elsemore, Dexter E.	11 Main St., Dixfield	04224
Fenger, John R.	241 Main St., Norway	04268
Ganguli, Adwaita K.	525 Somerset St., Rumford	04276
Gorayeb, Eugene	82 Maine Ave., Rumford	04276
Halladjian, Hagop	Rumford Com. Hosp., Rumford	04276
Handanos, Vassilios	191 Lincoln Ave., Rumford	04276
Harper, Harry L.	17 Main St., So. Paris	04281
Hazelton, Warren C.	2 E. Main St., So. Paris	04281
Hiebert, Joelle C., Jr.	Box 148, Norway	04268
Jackson, Norman M.	9 Franklin St., Rumford	04276
Martin, Joseph E.	35 Main St., Mexico	04257
Moore, Beryl M.	High St., Oxford	04270
Nangle, Thomas P.	West Paris	04289
Nash, Lyn G. R.	82 Maine Ave., Rumford	04276
Oestrich, Alfred	25 Hartford St., Rumford	04276
Rowe, Linwood M.	Rumford Com. Hosp., Rumford	04276
Royal, Albert P., Jr.	82 Maine Ave., Rumford	04276
Young, John	Paradise St., Bethel	04217

HONORARY

Adams, Lester	9 Knox St., Thomaston	04861
Hubbard, Roswell E.	Waterford	04088
Mills, Nathaniel	North Main St., Wolfboro, N.H.	03894

SENIOR

Howard, Henry M.	105 Franklin St., Rumford	04276
MacDougall, James A.	303 Penobscot St., Rumford	04276
Nelson, Chesley W.	Southport	04569

JUNIOR

Akerberg, Ake	386 Pearl St., Burlington, Vt.	05401
Phillips, David L.	99 Abby Lane, Portland	04103
Smith, Charles M.	42 Garrison Rd., Wellesley, Mass.	02181

SERVICE

Boynton, Willard H.	U.S. A.I.D., A.P.O. 271, New York, N.Y.	09271

PENOBSCOT COUNTY

President—Lloyd Brown, M.D.

Secretary—William M. Shubert, M.D.

Treasurer—Thornton W. Merriam, Jr., M.D.

ACTIVE

Adams, Asa C.	68 Main St., Orono	04473
Adams, Winford C.	R.F.D. #1, Box 184, Brewer	04412
Amorin, Jose V., Jr.	297 Center St., Bangor	04401
Andrews, Robert P.	489 State St., Bangor	04401
Babcock, Edward B.	431 State St., Bangor	04401
Ballesteros, Ernesto G.	292 Hammond St., Bangor	04401
Barrett, Robert J., Jr.	Cor. Union & James Sts., Bangor	04401
Bjorn, John C.	Hampden Highlands	04445
Blackwell, William M.	Millinocket Com. Hosp., Millinocket	04462
Blaisdell, Carl E.	47 Broadway, Bangor	04401
Blaisdell, William B., Jr.	47 Broadway, Bangor	04401
Bouton, Dale C.	205 French St., Bangor	04401
Bridges, Donald E.	336 Mt. Hope Ave., Bangor	04401
Brito, Joseph S.	255 Hammond St., Bangor	04401
Brown, Eugene E.	57 Summit Ave., Bangor	04401
Brown, Lloyd	186 State St., Bangor	04401
Burke, John E.	295 Pine St., Bangor	04401
Burke, Paul W.	5 High St., Newport	04953
Butterfield, Wilfred I.	119 Main St., Lincoln	04457
Chase, George O.	Eastern Maine Gen. Hosp., Bangor	04401
Chason, Sidney	128 Broadway, Bangor	04401
Clement, James D., Jr.	77 Essex St., Bangor	04401
Clough, Dexter J., 2nd	224 State St., Bangor	04401
Coulton, Donald	326 State St., Bangor	04401
Cross, Harold D.	Main Rd. & Summer St., Hampden Highlands	04445
Crowe, James H.	91 Grove St., Bangor	04401
Curran, Edward L.	209 State St., Bangor	04401
Cutler, Lawrence M.	31 Grove St., Bangor	04401
Desjardins, Richard F.	240 Penobscot Ave., Millinocket	04462
Dietrich, Mary M.	Box 93, Orrington	04474
Duffey, Richard V.	187 N. Main St., Brewer	04412
Dwyer, Clement S.	83 Essex St., Bangor	04401
Emery, Frederick C.	242 Cedar St., Bangor	04401
Evans, Stanley J.	336 Mt. Hope Ave., Bangor	04401
Eyerer, Rudolf E.	489 State St., Bangor	04401
Feeley, J. Robert	438 Garland St., Bangor	04401
Fergus, Andrew	336 Mt. Hope Ave., Bangor	04401
Gaillard, Richard A.	276 State St., Bangor	04401
Gilman, Herbert C.	240 Penobscot Ave., Millinocket	04462
Graves, Robert A.	Sunset Drive, Orono	04473
Hall, Walter L. H.	130 Middle St., Old Town	04468
Hamlin, Irvin E.	Main St., E. Millinocket	04430
Hill, Allison K.	431 State St., Bangor	04401

Holzwarth, Hans A.	920 State St., Bangor	04401
Houlihan, John S.	209 State St., Bangor	04401
Hughes, Edward J., Jr.	336 Mt. Hope Ave., Bangor	04401
Hutchins, Deane L.	10 Frost Lane, Orono	04473
Irwin, Carl W.	336 Mt. Hope Ave., Bangor	04401
Jillson, Otis F.	478 State St., Bangor	04401
Kadi, Francis J.	Bangor State Hosp., Bangor	04401
Kawamura, Takeo	336 Mt. Hope Ave., Bangor	04401
Kellogg, Robert O.	431 State St., Bangor	04401
Lane, Russell M.	129 Main St., Orono	04473
Madaras, John	Bangor State Hosp., Bangor	04401
Manter, Wilbur B.	1 Fern St., Bangor	04401
Mason, Peter H.	Millinocket Com. Hosp., Millinocket	04462
McEvoy, Charles D., Jr.	186 State St., Bangor	04401
McGinn, John F.	205 French St., Bangor	04401
McLean, Preston A.	336 Mt. Hope Ave., Bangor	04401
McQuoid, Robert M.	39 Columbia St., Bangor	04401
Meltzer, Jack N.	128 Broadway, Bangor	04401
Memmelaar, Joseph E.	431 State St., Bangor	04401
Merriam, Thornton W., Jr.	431 State St., Bangor	04401
Metz, Gerald A.	336 Mt. Hope Ave., Bangor	04401
Miragliuolo, Leonard G.	10 Maple St., Bangor	04401
Moulton, Gardner N.	5 Grove St., Bangor	04401
Munce, Richard T.	336 Mt. Hope Ave., Bangor	04401
Nesin, Bourcard	21 Penobscot Ave., Howland	04448
Netland, Anders T.	431 State St., Bangor	04401
O'Kane, Francis R.	122 Penobscot Ave., Millinocket	04462
Osler, Jay K.	74 Birch St., Bangor	04401
Palmer, Thomas H., Jr.	431 State St., Bangor	04401
Parrot, Hadley	431 State St., Bangor	04401
Pasternak, Irwin M.	336 Mt. Hope Ave., Bangor	04401
Pearson, John J.	100 S. Main St., Old Town	04468
Phillips, Lewis E.	336 Mt. Hope Ave., Bangor	04401
Porter, Edward C.	489 State St., Bangor	04401
Purinton, William A.	276 State St., Bangor	04401
Samuelsen, Thomas W.	Box 128, Lincoln Center	04458
Sensenig, David M.	431 State St., Bangor	04401
Sewall, Elmer M.	14 Park St., Orono	04473
Shapero, Benjamin L.	431 State St., Bangor	04401
Shubert, Alice J.	317 State St., Bangor	04401
Shubert, William M.	317 State St., Bangor	04401
Shurman, Hans	10 Spring St., Dexter	04930
Smith, Hugh A.	Eastern Maine Gen. Hosp., Bangor	04401
Striar, Ronald R.	94 Essex St., Bangor	04401
Strout, Warren G.	83 Essex St., Bangor	04401
Taylor, H. Lewis	25 Church St., Dexter	04930
Thomas, Philip B.	83 Essex St., Bangor	04401
Trowbridge, Mason, Jr.	142 Pine St., Bangor	04401
Tyson, Dudley B.	91 Grove St., Bangor	04401
Vickers, Martyn A.	268 State St., Bangor	04401
Vydas, Joseph	Bangor State Hosp., Bangor	04401
Wadsworth, Richard C.	489 State St., Bangor	04401
Wagner, Samuel L.	2 Holmes St., Winterport	04496
Weisz, Hans	17 Sunrise Ter., Orono	04473
Whitworth, John E.	336 Mt. Hope Ave., Bangor	04401
Wood, George W., III	156 No. Main St., Brewer	04412
Woodcock, John A.	35 Second St., Bangor	04401

HONORARY

Ames, Forrest B.	13 Longmeadow Dr., Brewer	04412
Craig, Allan	905 Egan Ave., Pacific Grove, Calif.	93950
Devan, Thomas A.	325-19th Ave., N.E., St. Petersburg, Fla.	33704
Emerson, W. Merritt	131 State St., Bangor	04401
Hedin, Carl J.	20 South Rd., Brewer	04412
Woodcock, Allan	35 Second St., Bangor	04401

SENIOR

Butler, Harry	77 Broadway, Bangor	04401
Dunham, Rand A.	42 Mountain View Ter., Rye, N.H.	03870
McNamara, Wesley C.	8 Lee St., Lincoln	04457
Ridlon, Magnus F.	MRA, Box 1060, Bangor	04401

SERVICE

Clough, Herbert T. (Col.) MC USAF, PEB, AFPMARXL,	Bldg. 3805, Lackland AFB, Texas	78236

PISCATAQUIS COUNTY

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Secretary-Treasurer—Isaac Nelson, M.D.

ACTIVE

Bradbury, Francis W.	16 E. Main St., Dover-Foxcroft	04426
Cornell, Robert C.	Box 518, Greenville	04441
Curtis, John B.	10 High St., Milo	04463
Garcia-Rey, Felix M.	14 Charles St., Milo	04463
Howard, George C.	Oak St., Guilford	04443
Lightbody, Charles H.	No. Main St., Guilford	04443
Nelson, Isaac	Box 506, Greenville	04441
Nielsen, Odd S.	120 Hudson Rd., Bangor	04401
Rodriguez, Araminta M.	14 Charles St., Milo	04463
Stitham, Linus J.	50 Main St., Dover-Foxcroft	04426

HONORARY

Bundy, Harvey C.	Milo	04463
Carde, Albert M.	33 Elm St., Milo	04463
Nickerson, Norman H.	Greenville	04441
Pritham, Fred J.	Greenville Jct.	04442
Stanhope, Charles N.	South St., Dover-Foxcroft	04426

JUNIOR

Johnson, James H., Jr.	Pine St., Centerville, Mass.	02632

SOMERSET COUNTY

President—Marian L. Strickland, M.D.

Secretary-Treasurer—John P. Dow, M.D.

ACTIVE

Amrein, H. Carl	29 Weston Ave., Madison	04950
Atallah, Antoine A.	Main St., Jackman Station	04946
Briggs, Paul R.	Hartland	04943
Dow, John P.	18½ Main St., Pittsfield	04967
Greenlaw, William A.	129 Main St., Fairfield	04937
Hoch, Gretl J.	Phillips	04966
Hornstein, Louis S.	220 Water St., Skowhegan	04976
Jordan, W. Edward, Jr.	Fairview Hosp., Skowhegan	04976
Kemezys, Kestutis M.	25 Garfield St., Madison	04950
Laney, Richard P.	50 Water St., Skowhegan	04976
McIntire, Percy C.	Central Maine San., Fairfield	04937
Reed, Howard L.	235 Madison Ave., Skowhegan	04976
Smith, Edgar J.	1 Park St., Fairfield	04937
Stein, Ernest W.	72 Main St., Pittsfield	04967
Strickland, Marian L.	Easy St., Canaan	04924
Sullivan, George E.	R.F.D. No. 1, Fairfield	04937
Swett, Carlton E.	218 Water St., Skowhegan	04976
Sy, Vincente L.	Milford Ave., Bingham	04920
Szelenyi, Ernest	Central Maine San., Fairfield	04937
Szendey, Andrew M.	26 Gray St., Madison	04950
Turner, Harland G.	Box 38, Norridgewock	04957
Zbyszycki, Tadeo	39 High St., Skowhegan	04976

HONORARY

Lord, Maurice E.	Box 537, Lake Placid, Fla.	33852
Marston, Henry E.	No. Anson	04958
Southworth, John D.	Hartland	04943
Webber, Merlon A.	33 Lancey St., Pittsfield	04967

SENIOR

Ball, Franklin P.	Bingham	04920
Philbrick, Maurice S.	3349 N.W. 32nd Crt., Fort Lauderdale, Fla.	33309

AFFILIATE

Grow, William B.	Box 153, China	04926

WALDO COUNTY

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Secretary-Treasurer—

ACTIVE

Caswell, John A.	16 Waldo Ave., Belfast	04915
Cobb, Norman E.	132 Main St., Belfast	04915
Temple, George L.	Fahey St., Belfast	04915
Webber, John R.	6 Northport Ave., Belfast	04915

HONORARY

Small, Foster C.	169 High St., Belfast	04915
Stevens, Carl H.	18 Franklin St., Belfast	04915

SENIOR

Torrey, Raymond L.	Main St., Searsport	04974

WASHINGTON COUNTY

President—Walter A. Mendyka, M.D.

Secretary-Treasurer—Karl V. Larson, M.D.

ACTIVE

Bates, James C.	Eastport	04631
French, Rowland B	16 Water St., Eastport	04631
Jacob, Donald R.	Princeton	04668
Kazutow, John	Box 113, Columbia Falls	04623
Kiel, Joseph B.	Columbia Falls	04623
Larson, Karl V.	E. Machias	04630
MacBride, Robert G.	25 Washington St., Lubec	04652
Mason, Sabry E.	Main St., Calais	04619
McAllister, John W.	17 Elm St., Machias	04654
Mendyka, Walter A.	Upper Court, Machias	04654
Mitchell, Hazen C.	Calais	04619
Nackley, George N.	1 School St., Machias	04654
Robertson, Donald M.	Box 188, Milbridge	04658
Sears, Harold G.	Second Ave., Woodland	04694

HONORARY

Bennet, DaCosta F.	4 Main St., Lubec	04652

SENIOR

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LaFond, Robert S.	258 Main St., Saco	04072
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Leigh, Kenneth E.	Brixham Rd., York	03909
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Lincourt, Armand S.	122 Main St., Sanford	04073
Lord, George A.	27 June St., Sanford	04073
Magaudda, Michael M. P.	39 Old Orchard St., Old Orchard Beach	04064
Magocsi, Alexander W.	York	03909
Moore, Conner M.	372 Main St., Saco	04072
Moulton, Marion K.	W. Newfield	04095
Murphy, John J.	84 Portland St., So. Berwick	03908
Myer, John C.	Nasson College, Springvale	04083
Nieuwkerk, Willem F.	Box 424, Kennebunkport	04046
O'Sullivan, William B.	331 Main St., Saco	04072
Ouellette, Marcel D.	120 Main St., Sanford	04073
Patane, Joseph M.	256 Alfred St., Biddeford	04005
Perrault, Oscar W.	30 South St., Biddeford	04005
Peterlein, Walter R., Jr.	75 Main St., Springvale	04083
Rhee, Woon B. Station A,	Harlem Valley State Hosp., Wingdale, N. Y.	12594
Richards, Carl E.	27 June St., Sanford	04073
Robert, Roger J. P.	331 Main St., Saco	04072
Ross, Maurice	372 Main St., Saco	04072
Roussin, William T.	48 Bacon St., Biddeford	04005
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Smith, Oney P.	Post Rd., Wells	04090
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Troop, Donald E.	75 Main St., Springvale	04083
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Yeon, Hyung J. Station A,	Harlem Valley State Hosp., Wingdale, N. Y.	12594

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Larochelle, Joseph R.	42 Bacon St., Biddeford	04005
Stevens, Harold W.	369 Ferry Rd., Saco	04072
Whitney, Ray L.	Cape Porpoise	04014

JUNIOR

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Shaw, G. Patrick	45-112 Namoku St., Kaneohe, Hawaii	96744

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The figures in parentheses refer to County Societies as follows: (1) Androscoggin, (2) Aroostook, (3) Cumberland, (4) Franklin, (5) Hancock, (6) Kennebec, (7) Knox, (8) Lincoln-Sagadahoc, (9) Oxford, (10) Penobscot, (11) Piscataquis, (12) Somerset, (13) Waldo, (14) Washington, (15) York.

Adams, Asa C., 68 Main St., Orono 04473 (10)
Adams, Lester, 9 Knox St., Thomaston 04861 (9)
Adams, Marvin C., 25 Bramhall St., Portland 04102 (3)
Adams, Winford C., R.F.D. #1, Box 184, Brewer 04412 (10)
Agan, Robert W., 144 State St., Portland 04101 (3)
Akar, Hamdi, 17 Grove St., Bath 04530 (8)
Akerberg, Ake, 386 Pearl St., Burlington, Vt. 05401 (9)
Albert, Rodrigue J., 69 W. Main St., Fort Kent 04743 (2)
Albro, Ward A., 10 Summer St., Houlton 04730 (2)
Alexander, Fay K., Lincolnville 04849 (7)
Allen, Donald E., Sebago Lake 04075 (3)
Allison, Horace R., 555 Main St., Presque Isle 04769 (2)
Ames, Forrest B., 13 Longmeadow Dr., Brewer 04412 (10)
Amfilo, Basil, 626 Main St., Lewiston 04240 (1)
Amorin, Jose V., Jr., 297 Center St., Bangor 04401 (10)
Amrein, H. Carl, 29 Weston Ave., Madison 04950 (12)
Anderson, Donald L., 369 Main St., Lewiston 04240 (1)
Anderson, Dorothy, 369 Main St., Lewiston 04240 (1)
Anderson, John B., 56 Baribeau Dr., Brunswick 04011 (3)
Andrews, Anneliese M., Maine Medical Ctr., Portland 04102 (3)
Andrews, John F., 67 Oak St., Boothbay Harbor 04538 (8)
Andrews, Robert P., 489 State St., Bangor 04401 (10)
Ansell, Harvey B., 39 Deering St., Portland 04101 (3)
Anton, Thomas, 260 Main St., Biddeford 04005 (15)
Apollonio, Howard L., Box 34, Rockport 04856 (7)
Applin, Hilton H., 6 Cumberland St., Brunswick 04011 (3)
Aranson, Albert, Maine Medical Ctr., Portland 04102 (3)
Archambault, John L., 421 Main St., Lewiston 04240 (1)
Archambault, Philip L., 346 Main St., Lewiston 04240 (1)
Armstrong, Paul E., No. Main St., Kingfield 04947 (4)
Asali, Louis A., 29 Deering St., Portland 04101 (3)
Asherman, Edward G., 275 Falmouth Dr., Falmouth 04105 (3)
Ashley, Alta, 11 Weston St., Augusta 04330 (6)
Atallah, Antoine A., Main St., Jackman Station 04946 (12)
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Avantaggio, Frank O., Jr., Bristol Rd., Damariscotta 04534 (8)

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Babcock, Edward B., 431 State St., Bangor 04401 (10)
Babcock, Harold S., Castine 04421 (5)
Bacastow, Merle S., 22 Bramhall St., Portland 04102 (3)
Bachrach, Louis, 65 Baribeau Dr., Brunswick 04011 (3)
Bachulus, John M., 3 Breckan Rd., Brunswick 04011 (8)
Bacon, Melvin, 122 Main St., Sanford 04073 (15)
Baldini, Elio, 22 Bramhall St., Portland 04102 (3)
Baldwin, Warren C., 42 Deering St., Portland 04101 (3)
Ball, Franklin P., Bingham 04920 (12)
Ballard, Jeanne C.,
167 Foulois Dr., Loring A.F.B., Limestone 04750 (2)
Ballesteros, Ernesto G., 292 Hammond St., Bangor 04401 (10)
Barnard, John M. H., Doctors Park, 89 Hosp. St., Augusta 04330 (6)
Barnes, Kirk K., Baribeau Dr., Brunswick 04011 (3)
Barrett, Robert J., Jr., Cor. Union & James Sts., Bangor 04401 (10)
Barron, Martin A., Jr., 37 Deering St., Portland 04101 (3)
Barron, Richard E., Western Ave., Winthrop 04364 (6)
Bates, James C., Eastport 04631 (14)
Bauman, Clair S., 159 Silver St., Waterville 04901 (6)
Bean, Achsa M., Star Route 32, Owl's Head 04854 (7)
Bean, H. Richard, 241 Main St., Norway 04268 (9)
Bearor, Robert A., Maine Medical Ctr., Portland 04102 (3)
Beaudet, Simon C., 25 Webster St., Lewiston 04240 (1)
Beckerman, Stanley C., 175 Silver St., Waterville 04901 (6)
Beeaker, Vincent H., 85 Wood St., Lewiston 04240 (1)
Beegel, Paul M., 185 Webster St., Lewiston 04240 (1)
Beliveau, Bertrand A., 56 Howe St., Lewiston 04240 (1)
Belknap, Samuel L., Damariscotta 04543 (8)
Belmont, Ralph S., 6 Washington St., Sanford 04073 (15)
Bennet, DaCosta F., 4 Main St., Lubec 04652 (14)
Bennet, Eben T., 49 Deering St., Portland 04101 (3)
Berger, Steven, Station B, Poughkeepsie, N. Y. 12602 (15)
Bettle, Ronald A., 32 Federal St., Brunswick 04011 (3)
Betts, Anthony, Maine Medical Ctr., Portland 04102 (3)
Bhatnagar, Hemendra N., 67 Silver St., Waterville 04901 (6)
Bidwell, Robinson L., 31 Bramhall St., Portland 04102 (3)
Bischoffberger, John M., Naples 04055 (3)
Bjorn, John C., Hampden Highlands 04445 (10)
Blackburn, Nelson P., Bath Memorial Hosp., Bath 04530 (8)
Blackwell, William M., Millinocket Com. Hosp., Millinocket 04462 (10)
Blaisdell, Carl E., 47 Broadway, Bangor 04401 (10)
Blaisdell, Elton R., 233 Vaughan St., Portland 04102 (3)
Blaisdell, William B., Jr., 47 Broadway, Bangor 04401 (10)
Bliss, Harry A., 39 Deering St., Portland 04101 (3)
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Bolduc, Jean L., 173 Main St., Waterville 04901 (6)
Bonney, James H., 53 Chadwick St., Portland 04102 (3)
Boone, Storer W., 54 Third Ave., Presque Isle 04769 (2)
Bostwick, George W., Box 388, Newcastle 04553 (8)
Bourassa, Harvey J., 47 Elm St., Waterville 04901 (6)
Bouton, Dale C., 205 French St., Bangor 04401 (10)
Bove, Louis G., 233 Vaughan St., Portland 04102 (3)
Bowman, Peter W., Box C, Pownal 04069 (3)
Bowne, Hays G., 9A Main St., Farmington 04938 (4)
Boynton, Willard H.,
U.S. A.I.D., A.P.O. 271, New York, N. Y. 09271 (9)
Bradbury, Francis W., 16 E. Main St., Dover-Foxcroft 04426 (11)
Branch, Charles F., 69 Gamage Ave., Auburn 04210 (1)
Brann, Henry A., 31 Western Ave., Augusta 04330 (6)
Branson, Sidney R., 37 Main St., South Windham 04082 (3)
Bridges, Donald E., 336 Mt. Hope Ave., Bangor 04401 (10)
Briggs, Paul R., Hartland 04943 (12)
Briggs, Russell C., Maine Medical Ctr., Portland 04102 (3)
Briggs, Winton, 291-A Ocean House Rd., Cape Elizabeth 04107 (3)
Brinkman, Carl A., 50A Flaggy Meadow Rd., Gorham 04038 (3)
Brinkman, Harry, 47 Perham St., Farmington 04938 (4)
Brinkman, Paul A., Farmington 04938 (4)
Britt, Richard W., Blue Hill 04614 (5)
Brito, Joseph S., 255 Hammond St., Bangor 04401 (10)
Broggi, Frank S., 18 Neal St., Portland 04102 (3)
Bromley, William C., Herrick Rd., Southwest Harbor 04679 (5)
Brouwer, Johan, 5 Beech St., Rockland 04841 (7)
Brown, Douglas H., 548 Shore Rd., Cape Elizabeth 04107 (3)
Brown, Eugene E., 57 Summit Ave., Bangor 04401 (10)
Brown, Lloyd, 186 State St., Bangor 04401 (10)
Brown, Stephen S., Mars Hill 04758 (2)
Brownlow, Bradley E., Blue Hill Mem. Hosp., Blue Hill 04614 (5)
Budd, William L., 36 Federal St., Brunswick 04011 (3)
Buell, William O., 357 Elm St., Biddeford 04005 (15)
Bull, Frank B., 5 Hasson St., Hallowell 04347 (6)
Bullington, Sunny J., 56 Baribeau Dr., Brunswick 04011 (3)
Bundy, Harvey C., Milo 04463 (11)
Bunker, Willard H., York Harbor 03911 (15)
Burden, Charles E., 1 North St., Bath 04530 (8)
Burke, John E., 295 Pine St., Bangor 04401 (10)
Burke, Paul W., 5 High St., Newport 04953 (10)
Burnett, Claude A., Jr., 59 Deering St., Portland 04101 (3)
Burnham, Harold N., 130 Main St., Gorham 04038 (3)
Burns, Robert M., Box 151, Westbrook 04092 (3)
Burr, Charles G., 48 School St., Houlton 04730 (2)
Busch, John J., 105 Elm St., Mechanic Falls 04256 (1)
Butler, Harry, 77 Broadway, Bangor 04401 (10)
Butterfield, Wilfred I., 119 Main St., Lincoln 04457 (10)

Callahan, Robert L., 12 Spruce St., Augusta 04330 (6)
Cameron, Dwight, 12 Mt. Desert St., Bar Harbor 04609 (5)
Campbell, Fred G., Box 484, Warren 04864 (7)
Canal, Ory D., 193 Cony St., Augusta 04330 (6)
Capron, Charles W., 22 Bramhall St., Portland 04102 (3)
Carde, Albert M., 33 Elm St., Milo 04463 (11)
Carrier, John W., Central Maine Gen. Hosp., Lewiston 04240 (1)
Carroll, Ronald J., 255 Western Prom., Portland 04102 (3)
Carson, Robert S., Baribeau Dr., Brunswick 04011 (3)
Carton, Arthur K., 7 Park St., Houlton 04730 (2)
Casey, William L., 131 State St., Portland 04101 (3)
Castellanos, Jose, Augusta State Hosp., Augusta 04330 (6)
Caswell, John A., 16 Waldo Ave., Belfast 04915 (13)
Chamberlin, Richard T., Thayer Hospital, Waterville 04901 (6)
Chapin, Milan A., 237 Turner St., Auburn 04210 (1)
Charest, Leandre R., 314 Alfred St., Biddeford 04005 (15)
Chase, George O., Eastern Maine Gen. Hosp., Bangor 04401 (10)
Chason, Sidney, 128 Broadway, Bangor 04401 (10)
Chasse, Richard L., 18 Park St., Waterville 04901 (6)
Chatterjee, Manu, 295 Water St., Augusta 04330 (3)
Chen, John T., Cherry Hill Ter., Waterville 04901 (6)
Christensen, Harry E., South Freeport 04078 (3)
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Ciembroniewicz, Julius E., 18 Spruce St., Augusta 04330 (6)
Clapp, Waldo A., 215 College St., Lewiston 04240 (1)
Clapperton, Gilbert, 300 Main St., Lewiston 04240 (1)
Clark, Frederick B., 131 State St., Portland 04101 (3)
Clarkin, Charles P., 64 Brookside Rd., Portland 04103 (3)
Clason, Walton P. C., 12 Pleasant St., Ellsworth 04605 (5)
Clement, James D., Jr., 77 Essex St., Bangor 04401 (10)
Clough, Dexter J., 2nd, 224 State St., Bangor 04401 (10)
Clough, Herbert T. (Col.) MC USAF, PEB, AFPMARXL,
Bldg. 3805, Lackland AFB, Texas 78236 (10)
Cloutier, Wilfrid A., 646 Main St., Lewiston 04240 (1)
Cobb, Norman E., 132 Main St., Belfast 04915 (13)
Coffin, Ernest L., Northeast Harbor 04662 (5)
Cohen, Abram I., Smith St., Harrison 04040 (3)
Cole, Donald P., 45 Deering St., Portland 04101 (3)
Colley, Maynard B., 14 Main St., Farmington 04938 (4)
Collins, H. Douglas, Caribou Clinic, Caribou 04736 (2)
Condit, Roger E., Box 711, Farmington 04938 (4)
Conneen, Thomas F., 131 Chadwick St., Portland 04102 (3)
Conner, William W.,
Univ. of Miami Medical Ctr., Miami, Fla. 33152 (8)
Contartese, Michael, 149 Main St., Freeport 04032 (3)
Conway, Kevin, Rumford Com. Hosp., Rumford 04276 (9)
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Cope, Sara K., 32 Deering St., Portland 04101 (3)
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Cornelius, Leland R., Hospital Dr., Bridgton 04009 (3)
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Cox, William V., 133 Court St., Auburn 04210 (1)
Craig, Allan, 905 Egan Ave., Pacific Grove, Calif. 93950 (10)
Crane, Lawrence, 157 Pine St., Portland 04102 (3)
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Cross, Harold D.,
Main Rd. & Summer St., Hampden Highlands 04445 (10)
Crowe, James H., 91 Grove St., Bangor 04401 (10)
Cruickshank, Frank S., Jr., Eaton Dr., Waterville 04901 (6)
Culver, Raymond E., 14 Gilman St., Waterville 04901 (6)
Cummings, Paul H., 181 Russell St., Lewiston 04240 (1)
Cummings, George O., Sr., 47 Deering St., Portland 04101 (3)
Cummings, George O., Jr., 47 Deering St., Portland 04101 (3)
Cuneo, Kenneth J., 31 Summer St., Kennebunk 04043 (15)
Cunningham, Alice N., 32 Federal St., Brunswick 04011 (3)
Curran, Edward L., 209 State St., Bangor 04401 (10)
Curtin, Daniel C., 555 Main St., Presque Isle 04769 (2)
Curtis, John B., 10 High St., Milo 04463 (11)
Cutler, Lawrence M., 31 Grove St., Bangor 04401 (10)

Dachslager, Philip, 8 Green St., Augusta 04330 (6)
Dalrymple, Sidney C., So. Great Rd., So. Lincoln, Mass. 01751 (8)
D'Andrea, Anthony L., 131 State St., Portland 04101 (3)
Darakjian, Ghazar H., 56 Baribeau Dr., Brunswick 04011 (3)
Darby, Alfred E., Jr., Box C, Pownal 04069 (3)
Darlington, Brinton T., Doctors Park, 89 Hosp. St., Augusta 04330 (6)
Davidson, David, 235 State St., Portland 04101 (3)
Davidson, Gisela K., 235 State St., Portland 04101 (3)
Davies, Lloyd G., 78 Main St., Fryeburg 04037 (3)
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Davis, Earle M., 2 School St., Waterville 04901 (6)
Davis, Paul V., 94 Main St., Bridgton 04009 (3)
Davy, Carmel L., Webber Hosp., Biddeford 04005 (3)
Davy, John R., 61 Thomas St., Portland 04102 (3)
DeCosta, Donald A., Poland Spring 04274 (1)
DeHart, Cor, Thayer Hospital, Waterville 04901 (6)
Deming, Howard R., Maine Medical Ctr., Portland 04102 (3)
Denison, John D., 105 Brunswick Ave., Gardiner 04345 (6)
Dennett, Carl G., 258 Main St., Saco 04072 (15)
Dennie, Raymond E., 111 Webster St., Lewiston 04240 (1)
Dennis, Richard H., 33 College Ave., Waterville 04901 (6)
Dennison, Frederick C., 3 Gillchrest St., Thomaston 04861 (7)
Derry, G. Hermann, 690 Congress St., Portland 04102 (3)
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Dietrich, Mary M., Box 93, Orrington 04474 (10)
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Dionne, Maurice J., Baribeau Dr., Brunswick 04011 (3)
Dionne, William E., 75 Main St., Springvale 04083 (15)
Dixon, Walter G., 16 Deering St., Norway 04268 (9)
Doble, Miriam, 990 Washington St., Bath 04530 (8)
Doby, Tibor, Mercy Hosp., Portland 04101 (3)
Dole, Richard R., 218 Main St., Waterville 04901 (6)
Donahue, Clement L., 22 Sweden St., Caribou 04736 (2)
Donahue, Gerald H., 4 Station St., Presque Isle 04769 (2)
Dooley, Francis M., 53 Deering St., Portland 04101 (3)
Dore, Clarence E., 2 School St., Waterville 04901 (6)
Dore, Kenneth E., 133 Main St., Fryeburg 04037 (3)
Dorfman, Irvin, Webber Hosp., Biddeford 04005 (15)
Dorogi, Louis V., Old Post Rd., Rt. 138, Bowdoinham 04008 (8)
Dougherty, John F., 112 Front St., Bath 04530 (8)
Douphinett, Otis J., 763 Congress St., Portland 04102 (3)
Dow, John P. 18½ Main St., Pittsfield 04967 (12)
Downing, J. Robert, 35 Summer St., Kennebunk 04043 (15)
Drake, Emerson H., 18 Bramhall St., Portland 04102 (3)
Drexler, James E., Ward Town Rd., Freeport 04032 (3)
Drummond, S. Dunton, Bar Mills 04004 (15)
Duffey, Richard V., 187 North Main St., Brewer 04412 (10)
Duffy, Wallace H., 100 Main St., Farmington 04938 (4)
Dunham, Marguerite C., R.F.D. #1, Dresden 04342 (2)
Dunham, Rand A., 42 Mountain View Ter., Rye, N.H. 03870 (10)
Dunn, Robert H., Veterans Adm., Togus 04330 (6)
Dwyer, Clement S., 83 Essex St., Bangor 04401 (10)
Dycio, George, 300 Pine St., Lewiston 04240 (1)
Dycio, Mary T., 3 Bayberry Lane, Lewiston 04240 (1)
Dyhrberg, Norman E., 331 Main St., Westbrook 04092 (3)

Earle, Ralph P., Vinalhaven 04863 (7)
Earnhardt, Joseph B., 55 Stroudwater St., Westbrook 04092 (3)
Eastman, Charles W., 15 Millet St., Livermore Falls 04254 (4)
Eddy, Robert H., 5 Beech St., Rockland 04841 (7)
Edouard, Julio, Box C, Pownal 04069 (1)
Egan, John F., Saddleback Rd., Rangeley 04970 (9)
Eisberg, Harry B., 357 Elm St., Biddeford 04005 (15)
Ekinci, Fevzi, 42 Main St., Livermore Falls 04254 (4)
Elkins, Alan M., Maine Medical Ctr., Portland 04102 (3)
Elsemore, Dexter E., 11 Main St., Dixfield 04224 (9)
Emanuel, Meyer, Veterans Adm., Togus 04330 (6)
Emerson, W. Merritt, 131 State St., Bangor 04401 (10)
Emery, Frederick C., 242 Cedar St., Bangor 04401 (10)
Endicott, Ruth E., Grasshopper Lane, Ogunquit 03907 (15)
English, Wesley J., Hancock St., Bar Harbor 04609 (5)
Eppinger, Ernst, 103 Wayside Rd., Portland 04102 (3)
Ervin, Edmund N., 2 School St., Waterville 04901 (6)
Evans, Richard, III, 781 High St., Bath 04530 (8)
Evans, Stanley J., 336 Mt. Hope Ave., Bangor 04401 (10)
Eyerer, Rudolf E., 489 State St., Bangor 04401 (10)

Fakhery, Behzad, 339 Webster St., Lewiston 04240 (3)
Faucher, Francois J., Grand Isle 04746 (2)
Feeley, J. Robert, 438 Garland St., Bangor 04401 (10)
Fenger, John R., 241 Main St., Norway 04268 (9)
Fergus, Andrew, 336 Mt. Hope Ave., Bangor 04401 (10)
Ferguson, Barbara, 80 Goff St., Auburn 04210 (1)
Ferguson, Franklin F., 22 Bramhall St., Portland 04102 (3)
Fichtner, Paul A., 781 High St., Bath 04530 (8)
Ficker, Robert F., Maine St., Kennebunkport 04046 (15)
Field, Richard L., Herrick Rd., Southwest Harbor 04679 (5)
Fife, James L., 65 Baribeau Dr., Brunswick 04011 (3)
Finks, Henry B., 73 Deering St., Portland 04101 (3)
Fiorica, Gaetano T., 12 Church St., Chisholm 04222 (4)
Fish, Nicholas, 50 Moody St., Saco 04072 (15)
Fisher, Dean H., State House, Augusta 04330 (6)
Fisher, Samson, 15 College Ave., Waterville 04901 (6)
Fishman, Louis N., 185 Webster St., Lewiston 04240 (1)
Fite, Marcia, Pemaquid Point 04558 (8)
Flanders, Merton N., 1 High St., Lewiston 04240 (1)
Floyd, Paul E., 2 Middle St., Farmington 04938 (4)
Fogg, C. Eugene, 35 Deering St., Portland 04101 (3)
Fortier, Andre P., 68 Foss St., Biddeford 04005 (15)
Fortier, Paul J., 111 Webster St., Lewiston 04240 (1)
Fox, Francis H., 83 West St., Portland 04102 (3)
Foy, I. Howard,
Arthur R. Gould Mem. Hosp., Presque Isle 04769 (2)
Freeman, William E., 107 Main St., Yarmouth 04096 (3)
French, Rowland B., 16 Water St., Eastport 04631 (14)
Frost, Robert A., 93 Summer St., Auburn 04210 (1)
Fuller, Barbara L., 20 Chestnut St., Rockland 04841 (7)
Fuller, George G., 50 Union St., Ellsworth 04605 (5)

Gaillard, Richard A., 276 State St., Bangor 04401 (10)
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Ganguli, Adwaita K., 523 Somerset St., Rumford 04276 (9)
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Gauvreau, Norman O., 78 Pine St., Lewiston 04240 (1)
Geer, Charles R., 208 Vaughan St., Portland 04102 (3)
Geer, George I., Jr., 208 Vaughan St., Portland 04102 (3)

Getchell, Ralph A., 14 Elmwood Rd., Cape Elizabeth 04107 (3)
Geyerhahn, George, 73 Deering St., Portland 04101 (3)
Gibbons, John F., 22 Bramhall St., Portland 04102 (3)
Giberson, Raymond G., 156 A Academy St., Presque Isle 04769 (2)
Giddings, Paul D., 31 Western Ave., Augusta 04330 (6)
Giesen, Joseph H., 34 Gilman St., Waterville 04901 (6)
Giguere, Eustache N., 90 Webster St., Lewiston 04240 (1)
Gilman, Herbert C., 240 Penobscot Ave., Millinocket 04462 (10)
Gingras, Napoleon J., 6 East Chestnut St., Augusta 04330 (6)
Givertz, Bernard, 131 Chadwick St., Portland 04102 (3)
Glassmire, Charles R., 37 Deering St., Portland 04101 (3)
Godsoe, John A., 7 Bramhall St., Portland 04102 (3)
Goduti, Richard J., 9 Deering St., Portland 04101 (3)
Goldfarb, Walter B., 72 West St., Portland 04102 (3)
Good, Philip G., 38 Deering St., Portland 04101 (3)
Goodof, Irving I., Thayer Hospital, Waterville 04901 (6)
Goodrich, Blynn O., 45 Roosevelt Ave., Waterville 04901 (6)
Goodwin, Ralph A., Sr., 56 Denison St., Auburn 04210 (1)
Goodwin, Ralph A., Jr., 33 Court St., Auburn 04210 (1)
Gorayeb, Eugene, 82 Maine Ave., Rumford 04276 (9)
Gormley, Eugene G., Market Square, Houlton 04730 (2)
Gould, George I., 79 Main St., Richmond 04357 (6)
Granger, Robert C., Blue Hill 04614 (5)
Graves, Robert A., Sunset Drive, Orono 04473 (10)
Gray, Philip L., Blue Hill 04614 (5)
Greco, Edward A., 12 Pine St., Portland 04102 (3)
Greco, Edward A., Jr., 12 Pine St., Portland 04102 (3)
Green, Ross W., 33 Court St., Auburn 04210 (1)
Greene, John P., 19 Sabattus St., Lewiston 04240 (1)
Greene, Merrill S. F., 466 Main St., Lewiston 04240 (1)
Greenlaw, William A., 129 Main St., Fairfield 04937 (12)
Gregory, Frederick J., So. Main St., Caribou 04736 (2)
Gregory, Philip O., St. Andrews Hosp., Boothbay Harbor 04538 (8)
Griffin, Carl R., Jr., 61 Atlantic Ave., Boothbay Harbor 04538 (8)
Griffiths, Eugene B., 350 Main St., Presque Isle 04769 (2)
Grimes, Gilbert R., 185 Webster St., Lewiston 04240 (1)
Grow, William B., Box 153, China 04926 (12)
Guillemette, Maurice R., 107 Water St., Augusta 04330 (6)
Guite, L. Armand, Sr., 45 Elm St., Waterville 04901 (6)
Guite, L. Armand Jr., 45 Elm St., Waterville 04901 (6)

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Haas, Rudolph, 480 Main St., Lewiston 04240 (1)
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Halladjian, Hagop, Rumford Com. Hosp., Rumford 04276 (9)
Hallett, George W., Jr., 22 Bramhall St., Portland 04102 (3)
Halperin, David C., 89 Hospital St., Augusta 04330 (6)
Hamilton, Virginia C., South Harpswell 04079 (8)
Hamlin, Irvin E., Main St., East Millinocket 04430 (10)
Hamlin, Paul S., 122 Academy St., Presque Isle 04769 (2)
Handanos, Vassilios, 191 Lincoln Ave., Rumford 04276 (9)
Hanley, Daniel F., Box 250, Brunswick 04011 (3)
Hannigan, Charles A., 85 Goff St., Auburn 04210 (1)
Hannigan, Margaret H., 85 Goff St., Auburn 04210 (1)
Haq, Badi Z., Webber Hosp., Biddeford 04005 (15)
Hardy, Edmund W., 134 U.S. Rt. 1, Falmouth 04105 (3)
Harkins, Michael J., 437 Main St., Lewiston 04240 (1)
Harper, Harry L., 17 Main St., South Paris 04281 (9)
Harrison, George J., Market Square, Houlton 04730 (2)
Harvey, Thomas G., 59 Mayo St., Caribou 04736 (2)
Harvey, William C., 1909 Sioux, Glendale, Ariz. 85301 (2)
Hawkes, Richard S., 233 Vaughan St., Portland 04102 (3)
Hawkins, Donald B., Atlantic Ave. and Sea St., Camden 04843 (7)
Hayes, James C., 6 E. Chestnut St., Augusta 04330 (6)
Hayward, I. Mead, So. Main St., Caribou 04736 (2)
Hazelton, Warren C., 2 E. Main St., So. Paris 04281 (9)
Hazzard, Lawrence R., Cider Hill Rd., York 03909 (15)
Head, Rufus W., U.S.N. Activity, Winter Harbor 04693 (5)
Hedin, Carl J., 20 South Rd., Brewer 04412 (10)
Heifetz, Ralph, 173 State St., Portland 04101 (3)
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Herring, Leon D., Memorial Dr., Winthrop 04364 (6)
Hiebel, Joseph J., 34 Gilman St., Waterville 04901 (6)
Hiebert, Clement A., 18 Bramhall St., Portland 04102 (3)
Hiebert, Joelle C., Jr., Box 148, Norway 04268 (9)
Higgins, George F., 122 Academy St., Presque Isle 04769 (2)
Hill, Allison K., 431 State St., Bangor 04401 (10)
Hill, Anthony B., 283 Water St., Augusta 04330 (6)
Hill, Douglas R., 855 Sawyer St., South Portland 04106 (3)
Hill, Howard F., 33 College Ave., Waterville 04901 (6)
Hill, Kevin, 33 College Ave., Waterville 04901 (6)
Hill, Paul S., Jr., 323 Main St., Saco 04072 (15)
Hinckley, Harris, 331 Cottage Rd., South Portland 04106 (3)
Hirschberger, Celia, Augusta State Hosp., Augusta 04330 (6)
Hoch, Gretl J., Phillips 04966 (12)
Hoffman, Alvin A., Box 38, York 03909 (15)
Hogan, Chester F., 62 Main St., Houlton 04730 (2)
Holt, Alfred T., Bath Mem. Hosp., Bath 04530 (8)
Holt, C. Lawrence, 41 Fox Ave., St. John's, Newfoundland, Can. (3)
Holz, Peter H., 51 Elm St., Camden 04843 (7)
Holzwarth, Hans A., 920 State St., Bangor 04401 (10)
Hopkins, Herbert J., 24 Portland Ave., Old Orchard Beach 04064 (15)
Hornberger, H. Richard, 2 School St., Waterville 04901 (6)
Hornstein, Louis S., 220 Water St., Skowhegan 04976 (12)
Horsman, Donald H., 50 Goff St., Auburn 04210 (1)
Houle, Marcel P., 200 Alfred St., Biddeford 04005 (15)
Houlihan, John S., 209 State St., Bangor 04401 (10)
Howard, Emery B., Jr., 23A Summer St., Rockland 04841 (7)
Howard, George C., Oak St., Guilford 04443 (11)
Howard, Henry M., 105 Franklin St., Rumford 04276 (9)
Hsu, Theodore S., 14 High St., Ellsworth 04605 (5)
Hubbard, Roswell E., Waterford 04088 (9)
Hudson, Henry A., 138 Atlantic Ave., Boothbay Harbor 04538 (8)
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Hunter, Albert L., 45 Golder St., Lewiston 04240 (7)
Huntress, Roderick L., 988 Sawyer St., South Portland 04106 (3)
Hurd, Allan C., 5 Hasson St., Hallowell 04347 (6)
Hutchins, Deane L., 10 Frost Lane, Orono 04473 (10)

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Iszard, David M., 291 Ocean House Rd., Cape Elizabeth 04107 (3)

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Jacob, Donald R., Princeton 04668 (14)
Jacobson, Payson B., 295 Brighton Ave., Portland 04102 (3)
James, Chakmakis, 47 Howe St., Lewiston 04240 (1)
James, John A., 117 Goff St., Auburn 04210 (1)
Jameson, C. Harold, Chestnut St., Camden 04843 (7)
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Johnson, Gordon N., Box 86, Houlton 04730 (2)
Johnson, James H., Jr., Pine St., Centerville, Mass. 02632 (11)
Johnson, Oscar R., 9 Parsons Rd., Portland 04103 (3)
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Johnston, James S., 258 Main St., Saco 04072 (15)
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Jones, Paul A., Sr., General Delivery, Union 04862 (7)
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Kellogg, Robert O., 431 State St., Bangor 04401 (10)
Kemezys, Kestutis M., 25 Garfield St., Madison 04950 (12)
Kent, Stanley W., 42 Deering St., Portland 04101 (3)
Kershner, Warren E., 57 Green St., Bath 04530 (8)
Kibbe, Frank W., R.F.D., Lincolnville 04849 (7)
Kiel, Joseph B., Columbia Falls 04623 (14)
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Kinder, Edward L., Jr., 1027 Washington St., Bath 04530 (8)
King, Merrill J., Jr., 22 White St., Rockland 04841 (7)
Kinghorn, Charles W., 4 Wentworth St., Kittery 03904 (15)
Kirk, William V., Eagle Lake 04739 (2)
Knickerbocker, Charles H., 15 High St., Bar Harbor 04609 (5)
Knoppers, Jan. 54 Pine St., Lewiston 04240 (1)
Knowles, John E., 131 Chadwick St., Portland 04102 (3)
Knowles, Robert M., 49 Deering St., Portland 04101 (3)
Konecki, John T., St. Mary's Gen. Hosp., Lewiston 04240 (1)
Kopfmann, Harry, Deer Isle 04627 (5)
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LaFlamme, Paul J., 106 Russell St., Lewiston 04240 (1)
LaFollette, Bruce F., 157 Pine St., Portland 04102 (3)
LaFond, Robert S., 258 Main St., Saco 04072 (15)
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Laltoo, Joseph M., 6 Long Sands Rd., York 03909 (15)
Lambdin, Morris A., Maine Coast Mem. Hosp., Ellsworth 04605 (5)

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Lane, Russell M., 129 Main St., Orono 04473 (10)
Laney, Richard P., 50 Water St., Skowhegan 04976 (12)
Langer, Ella, 192 Capitol St., Augusta 04330 (6)
Lansing, Peter F., 16 Macomber Ave., Augusta 04330 (6)
Lape, C. Philip, 7 Bramhall St., Portland 04102 (3)
Lapirow, Harry, 99 Main St., Kennebunk 04043 (15)
Lappin, John J., 171 State St., Portland 04101 (3)
Larochelle, Joseph R., 42 Bacon St., Biddeford 04005 (15)
Larrabee, Charles F., 48 Mt. Desert St., Bar Harbor 04609 (5)
Larson, Karl V., East Machias 04630 (14)
Lathbury, Vincent T., Medical Arts Building, Rockland 04841 (7)
Laughlin, K. Alexander, 201 State St., Portland 04101 (3)
Lawry, Oram R., Jr., 96 Limerock St., Rockland 04841 (7)
Leadley, Peter J., Dept. of Health & Welfare, Augusta 04330 (6)
Leckie, Michael I., 94 Auburn St., Portland 04103 (3)
Leigh, Kenneth E., Brixham Rd., York 03909 (15)
Leighton, Wilbur F., 192 State St., Portland 04101 (3)
Leiter, Laban W., 175 Vaughan St., Portland 04102 (3)
Leitman, Reuben, 188 Sabattus St., Lewiston 04240 (1)
Leonard, Lawrence M., 7 Bramhall St., Portland 04102 (3)
Leonardi, Joseph A., Central Maine Gen. Hosp., Lewiston 04240 (1)
Lepore, Anthony E., 128 Maine Ave., Gardiner 04345 (6)
Lesieur, Louis C., 255 Beach St., Saco 04072 (15)
Levy, Richard A., 14 Deering St., Portland 04101 (3)
Libby, Harold E., 702 Main St., Westbrook 04092 (3)
Lichter, Horacio A., 54 Pine St., Lewiston 04240 (1)
Lidstone, Frederick B., 117 Goff St., Auburn 04210 (1)
Lightbody, Charles H., No. Main St., Guilford 04443 (11)
Ligthart, Pim W. K., 147 Washington St., Auburn 04210 (1)
Lincoln, John R., 22 Bramhall St., Portland 04102 (3)
Lincourt, Armand S., 122 Main St., Sanford 04073 (15)
Llorente, Aldo F., 56 Baribeau Dr., Brunswick 04011 (3)
Loewenstein, George, 1007 Woodside Dr., Clearwater, Fla. 33516 (7)
Lombard, Reginald T., 793 Main St., South Portland 04106 (3)
Lord, George A., 27 June St., Sanford 04073 (15)
Lord, Maurice E., Box 537, Lake Placid, Florida 33852 (12)
Lorentz, John J., Maine Medical Ctr., Portland 04102 (3)
Lorimer, Robert V., 169 State St., Portland 04101 (3)
Loring, William E., 144 State St., Portland 04101 (3)
Love, Robert B., 97 Main St., Gorham 04038 (3)
Lovely, David K., 46 Deering St., Portland 04101 (3)
Lutes, Chris A., 7 Bramhall St., Portland 04102 (3)
Lynn, Geraldine, 188 Russell St., Lewiston 04240 (1)

MacBride, Robert G., 25 Washington St., Lubec 04652 (14)
MacDonald, G. Vernon A., Box 228, Ashland 04732 (2)
MacDonald, Lewis V. A.,
Mary Hitchcock Mem. Hosp., Hanover, N. H. 03755 (2)
MacDougall, James A., 303 Penobscot St., Rumford 04276 (9)
Mack, Francis X., 144 State St., Portland 04101 (3)
MacVane, William L., Jr., 211 State St., Portland 04101 (3)
Madaras, John, Bangor State Hosp., Bangor 04401 (10)
Madigan, John B., Houlton 04730 (2)
Magaudda, Michael M. P.,
39 Old Orchard St., Old Orchard Beach 04064 (15)
Magocsi, Alexander W., York 03909 (15)
Maier, Paul, 723 Congress St., Portland 04102 (3)
Maltby, George L., 31 Bramhall St., Portland 04102 (3)
Manter, Wilbur B., 1 Fern St., Bangor 04401 (10)
Marc, Joseph A., 340 E. 34th St., New York, N. Y. 10016 (8)
Marcotte, Andre P., 342 Main St., Lewiston 04240 (1)
Marquardt, Matthias, 109 Cony St., Augusta 04330 (6)
Marshall, Donald F., 25 Bramhall St., Portland 04102 (3)
Marshall, Joseph A., 177 Main St., Waterville 04901 (6)
Marshall, Paul A.,
R.F.D. No. 1, Box 121A, Ridge Rd., Fairfield 04937 (6)
Marshall, Richard A., Central Maine Gen. Hosp., Lewiston 04240 (1)
Marston, Henry E., North Anson 04958 (12)
Marston, Paul C., Kezar Falls 04047 (3)
Martel, Cyprien L., Jr., 91 Bartlett St., Lewiston 04240 (1)
Martin, Joseph E., 35 Main St., Mexico 04257 (9)
Martin, Ralf, 131 Chadwick St., Portland 04102 (3)
Martin, Thomas A., 157 Pine St., Portland 04102 (3)
Mason, Sabry E., Main St., Calais 04619 (14)
Mason, Peter H., Millinocket Com. Hosp., Millinocket 04462 (10)
Mathews, Hugh J., Jr., 345 Water St., Gardiner 04345 (6)
Matthews, Edward C., 131 Chadwick St., Portland 04102 (3)
Mazerolle, Denis R., 228 Sweden St., Caribou 04736 (2)
Mazzone, Giovanni, 499 Stevens Ave., Portland 04103 (3)
McAfee, Robert E., 18 Bramhall St., Portland 04102 (3)
McAllister, John W., 17 Elm St., Machias 04654 (14)
McCann, Eugene C., 49 Deering St., Portland 04101 (3)
McCrum, Philip H., 188 State St., Portland 04101 (3)
McEvoy, Charles D., Jr., 186 State St., Bangor 04401 (10)
McFarland, Edward A., Baribeau Dr., Brunswick 04011 (3)
McGinn, John F., 205 French St., Bangor 04401 (10)
McGuire, Stuart W., 131 State St., Portland 04101 (3)
McIntire, Barron F., Jr., 13 W. Elm St., Yarmouth 04096 (3)
McIntire, Percy C., Central Maine San., Fairfield 04937 (12)
McIntyre, John D., 50 Union St., Ellsworth 04605 (5)
McKendry, James R., 12 Spruce St., Augusta 04330 (6)
McLaren, John J., 31 Western Ave., Augusta 04330 (6)
McLaughlin, Clarence R., 345 Water St., Gardiner 04345 (6)
McLaughlin, Ivan E., 345 Water St., Gardiner 04345 (6)
McLean, E. Allen, 29 Deering St., Portland 04101 (3)
McLean, Preston A., 336 Mt. Hope Ave., Bangor 04401 (10)
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McMichael, Morton, 73 Deering St., Portland 04101 (3)
McNamara, Wesley C., 8 Lee St., Lincoln 04457 (10)
McQuillan, Arthur H., 177 Main St., Waterville 04901 (6)
McQuoid, Robert M., 39 Columbia St., Bangor 04401 (10)
Melendy, Oakley A., Doctors Park, 89 Hosp. St., Augusta 04330 (6)
Melkis, Andrew, Box 161, Gray 04039 (3)
Melnick, Jacob, 261 Congress St., Portland 04101 (3)
Meltzer, Jack N., 128 Broadway, Bangor 04401 (10)
Memmelaar, Joseph E., 431 State St., Bangor 04401 (10)
Mendes, Joseph M., 5 School St., Lisbon Falls 04252 (1)
Mendros, John G., 111 Webster St., Lewiston 04240 (1)
Mendyka, Walter A., Upper Court, Machias 04654 (14)
Merriam, Thornton W., Jr., 431 State St., Bangor 04401 (10)
Metz, Gerald A., 336 Mt. Hope Ave., Bangor 04401 (10)
Michaud, Joseph C., 160 Silver St., Waterville 04901 (6)
Milazzo, John, 42 Elm St., Auburn 04210 (1)
Miller, Buell A., 7 Bramhall St., Portland 04102 (3)
Miller, Clark F., Greene 04236 (1)
Miller, Hudson R., 11 Turner St., Auburn 04210 (1)
Miller, JoAnn M. H., Reef Rd., Cape Elizabeth 04107 (3)
Miller, Thor, 752 Main St., Westbrook 04092 (3)
Milliken, Howard H.,
R No. 1, Pond Rd., (Manchester), Hallowell 04347 (6)
Millington, Paul A., 44 Mountain St., Camden 04843 (7)
Mills, Nathaniel, North Main St., Wolfboro, N. H. 03894 (9)
Miniutti, Gloria M., 32 Deering St., Portland 04101 (3)
Minton, Paul R., 131 Chadwick St., Portland 04102 (3)
Miragliuolo, Leonard G., 10 Maple St., Bangor 04401 (10)
Miskimins, Joseph H., 175 Silver St., Waterville 04901 (6)
Mitchell, Hazen C., Calais 04619 (14)
Mohlar, Robert G., Doctors Park, 89 Hospital St., Augusta 04330 (6)
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Monkhouse, William A., 131 State St., Portland 04101 (3)
Monsivais, Alfredo, 1 Western Ave., Winthrop 04364 (6)
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Moore, Conner M., 372 Main St., Saco 04072 (15)
Moore, Valentine J., Thayer Hospital, Waterville 04901 (6)
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Morrison, Robert M., 148 State St., Portland 04101 (3)
Morse, Edward K., 22 White St., Rockland 04841 (7)
Moulton, Alhert W., Sr., 180 State St., Portland 04101 (3)
Moulton, Albert W., Jr., 180 State St., Portland 04101 (3)
Moulton, Gardner N., 5 Grove St., Bangor 04401 (10)
Moulton, Marion K., West Newfield 04095 (15)
Moulton, Sumner E., 19 Deering St., Portland 04101 (3)
Munce, Richard T., 336 Mt. Hope Ave., Bangor 04401 (10)
Mundie, Perley J., 32 North St., Calais 04619 (14)
Murphy, John J., 84 Portland St., South Berwick 03908 (15)
Murray, John G., Jr., Blue Hill Mem. Hosp., Blue Hill 04614 (5)
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Nash, Lyn G. R., 82 Maine Ave., Rumford 04276 (9)
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Nelson, Chesley W., Southport 04569 (9)
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O'Sullivan, William B., 331 Main St., Saco 04072 (15)
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Ouellette, Benoit, 77 Main St., Fort Kent 04743 (2)
Ouellette, Marcel D., 120 Main St., Sanford 04073 (15)

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Pogue, Jackson S., 529 Gilmore Ave., Trafford, Pa. 15085 (3)
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Pomerleau, Rodolphe J. F., Cascade Pk., Rt. 1, Waterville 04901 (6)
Pope, W. Dean, 6 Pleasant St., Rangeley 04970 (4)
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Poulin, Albert A., Cherry Hill Dr., Waterville 04901 (6)
Poulin, James E., 177 Main St., Waterville 04901 (6)
Powell, Ralph C., Damariscotta 04543 (8)
Pratt, Loring W., 177 Main St., Waterville 04901 (6)
Price, Richard D., R.F.D. 2, Caribou 04736 (2)
Pritham, Fred J., Greenville Junction 04442 (11)
Proctor, Ray A., Garden Circle, Caribou 04736 (2)
Proctor, Thomas E., Boothbay Harbor 04538 (8)
Proudian, Paul O., 776 Main St., Westbrook 04092 (3)
Proulx, Harvey J., 185 Webster St., Lewiston 04240 (1)
Provost, Helen C., 48 Green St., Augusta 04330 (6)
Purinton, William A., 276 State St., Bangor 04401 (10)

Rand, Carleton H., 219 Oak St., Lewiston 04240 (1)
Rando, Joseph J., 111 Webster St., Lewiston 04240 (1)
Ray, Ferris S., 7 Bramhall St., Portland 04102 (3)
Reed, Howard L., 235 Madison Ave., Skowhegan 04976 (12)
Reed, James W., 18 Main St., Farmington 04938 (4)
Reel, John J., 59 So. Front St., Richmond 04357 (6)
Reeves, Edward L., 179 Sabattus St., Lewiston 04240 (1)
Reeves, Helene M., 179 Sabattus St., Lewiston 04240 (1)
Rerrick, Edwin G., Box C, Pownal 04069 (3)
Reynolds, Arthur P., 29 Second St., Presque Isle 04769 (2)
Reynolds, John F., 216 Main St., Waterville 04901 (6)
Reynolds, Ralph L., 216 Main St., Waterville 04901 (6)
Rhee, Woon B.,
Station A, Harlem Valley State Hosp., Wingdale, N. Y. 12594 (15)
Richards, A. Dewey, 11 Gage St., Bridgton 04009 (3)
Richards, Carl E., 27 June St., Sanford 04073 (15)
Richards, Lee W., Jr., 21 Western Ave., Augusta 04330 (6)
Rideout, Samuel, Green St., Fort Fairfield 04742 (2)
Ridlon, Joseph R., 58 South St., Gorham 04038 (3)
Ridlon, Magnus F., MRA, Box 1060, Bangor 04401 (10)
Robert, Roger J. P., 331 Main St., Saco 04072 (15)
Robertson, Donald M., Box 188, Milbridge 04658 (14)
Robertson, George J., 171 Harrison Ave., Boston, Mass. 02111 (6)
Robinson, Hugh P., 27 Deering St., Portland 04101 (3)
Rock, Daniel A., 477 Main St., Lewiston 04240 (1)
Rodriguez, Araminta M., 14 Charles St., Milo 04463 (11)
Rodriguez, Jose M., 109 Silver St., Waterville 04901 (6)
Rogers, Albert M., 157 Pine St., Portland 04102 (3)
Rohm, Walter, Augusta State Hosp., Augusta 04330 (6)
Root, John A., 22 White St., Rockland 04841 (7)
Rosenblatt, Stanley D., 480 Main St., Lewiston 04240 (1)
Ross, Maurice, 372 Main St., Saco 04072 (15)
Roussin, William T., 48 Bacon St., Biddeford 04005 (15)
Rowe, Linwood M., Rumford Com. Hosp., Rumford 04276 (9)
Royal, Albert P., Jr., 82 Maine Ave., Rumford 04276 (9)
Rubins, Nina B., E. A. Center Mem. Clinic, Steep Falls 04085 (3)
Rubins, Talivaldis, E. A. Center Mem. Clinic, Steep Falls 04085 (3)
Russell, Daniel F. D., Leeds 04263 (1)
Russell, Robert F., Penobscot 04476 (5)
Russell, Theodore M.,
Doctors Park, 89 Hospital St., Augusta 04330 (6)

Sager, George F., 18 Bramhall St., Portland 04102 (3)
Samuelsen, Thomas W., Box 128, Lincoln Center 04458 (10)
Sanfacon, Philip G., Main St., Van Buren 04785 (2)
Sanford, Theodore H., 185 Webster St., Lewiston 04240 (1)
Santoro, Domenico A., 43 Deering St., Portland 04101 (3)
Sapiro, Howard M., 171 State St., Portland 04101 (3)
Satir, Ahmet, Box 682, Augusta 04330 (6)
Saunders, Allen I., Ferry Rd., R.F.D. 2, Augusta 04330 (6)
Saunders, Norman W., 233 Vaughan St., Portland 04102 (3)
Saunders, Sallie H., R.F.D., Camden 04843 (7)
Savage, Richard L., 4 Elm St., Fort Kent 04743 (2)
Sawyer, Howard P., Jr., 22 Bramhall St., Portland 04102 (3)
Schmidt, Lorrimer M., Veterans Adm., Togus 04330 (6)
Schumacher, William E.,
14 Westwood Rd., MD "B", Augusta 04330 (6)
Schwarz, Harald J., Seton Hospital, Waterville 04901 (6)
Scolten, Adrian H., 32 Deering St., Portland 04101 (3)
Sears, Harold G., Second Ave., Woodland 04694 (14)
Seligman, Morris J., Veterans Adm., Togus 04330 (6)
Selmeci, Tibor G., Hayden Ct., Woodstock, N. B., Can. (2)
Selvage, Irving L., Jr., 22 Bramhall St., Portland 04102 (3)
Senenky, Joseph P., Augusta State Hosp., Augusta 04330 (6)
Sensenig, David M., 431 State St., Bangor 04401 (10)
Sewall, Elmer M., 14 Park St., Orono 04473 (10)
Sewall, Kenneth W., 2 School St., Waterville 04901 (6)
Shahinfar, Abdol-Hamid, Cary Mem. Hosp., Caribou 04736 (2)
Shapero, Benjamin L., 431 State St., Bangor 04401 (10)
Shapiro, Morrill, 7 Bramhall St., Portland 04102 (3)
Shaw, G. Patrick, 45-112 Namoku St., Kaneohe, Hawaii 96744 (15)
Shaw, John H., 131 Sewall St., Augusta 04330 (6)
Sheehan, Terrance J.,
Doctors Park, 89 Hospital St., Augusta 04330 (6)
Shelton, M. Tieche, 21 Western Ave., Augusta 04330 (6)
Shems, Albert, 487 Main St., Lewiston 04240 (1)
Sherman, Fuller G., Spruce Pt., Boothbay Harbor 04538 (8)
Shields, Daniel R., 369 Main St., Lewiston 04240 (1)
Shields, Thomas F., 300 Pine St., Lewiston 04240 (1)
Shubert, Alice J., 317 State St., Bangor 04401 (10)
Shubert, William M., 317 State St., Bangor 04401 (10)
Shurman, Hans, 10 Spring St., Dexter 04930 (10)
Sidwell-Thompson, Doris M.,
R.F.D. Whittier Rd., W. Ossipee, N. H. 03890 (3)
Sigofoos, J. Harvey, Pleasant Point 04563 (7)
Silver, Randall H., Maine Coast Mem. Hosp., Ellsworth 04605 (5)
Simpson, Margaret R., 2 Sea Barn Rd., Cape Elizabeth 04107 (6)
Sirodot, George, Box 111, Independence, Iowa 50644 (3)
Skillin, Charles E., 690 Congress St., Portland 04102 (3)
Sleeper, Francis H., 3 Colony Rd., Augusta 04330 (6)
Small, Foster C., 169 High St., Belfast 04915 (13)
Smith, Carroll H., Box 785, Presque Isle 04769 (2)
Smith, Charles M., 42 Garrison Rd., Wellesley, Mass. 02181 (9)
Smith, Edgar J., 1 Park St., Fairfield 04937 (12)
Smith, Gerald R., Ogunquit 03907 (15)
Smith, Hugh A., Eastern Maine Gen. Hosp., Bangor 04401 (10)
Smith, Jacob, 118 Front St., Bath 04530 (8)
Smith, James O., 118 Front St., Bath 04530 (8)
Smith, Joseph I., 118 Front St., Bath 04530 (8)
Smith, Kenneth E., Veterans Adm., Togus 04330 (6)
Smith, Margaret S., Box 967, Presque Isle 04769 (2)

Smith, Oney P., Post Rd., Wells 04090 (15)
Somerville, Robert B., 45 Hillside St., Presque Isle 04769 (2)
Somerville, Wallace B., Mars Hill 04758 (2)
Sommer, Robert G., 47 Deering St., Portland 04101 (3)
Sommerfeld, Kurt A., 182 Dresden Ave., Gardiner 04345 (6)
Southworth, John D., Hartland 04943 (12)
Sowles, Horace K., 413 Blackstrap Rd., Falmouth 04105 (3)
Spear, William, 107 Main St., Lisbon Falls 04252 (1)
Spellman, Francis A., Veterans Adm., Togus 04330 (6)
Stadler, Eliot T., West Gouldsboro 04687 (5)
Stanhope, Charles N., South St., Dover-Foxcroft 04426 (11)
Steele, Charles W., 472 Main St., Lewiston 04240 (1)
Stein, Ernest W., 72 Main St., Pittsfield 04967 (12)
Stephenson, Richard B., Bldg. 1,
Rm. 118, National Institutes of Health, Bethesda, Md. 20014 (3)
Stetkevych, Alexander G.,
12 Meyers Crt., Colonie, Albany, N. Y. 12200 (8)
Stevens, Carl H., 18 Franklin St., Belfast 04915 (13)
Stevens, Harold W., 369 Ferry Rd., Saco 04072 (15)
Stevens, Theodore M., 148 State St., Portland 04101 (3)
Stewart, Nancy H., Hancock St., Bar Harbor 04609 (5)
Stewart, Winston G., Hancock St., Bar Harbor 04609 (5)
Stimson, Barbara B., Star Route 22-282, Owl's Head 04854 (7)
Stinchfield, Allan J., Box 343, Augusta 04330 (6)
Stitham, Linus J., 50 Main St., Dover-Foxcroft 04426 (11)
Stocks, Joseph F., 18 Longfellow Ave., Brunswick 04011 (3)
Storer, Daniel P., 108 Fessenden St., Portland 04103 (3)
Strach, Toffield B. J., 3 Deering St., Portland 04101 (3)
Strauss, Bella S., 50 Union St., Ellsworth 04605 (5)
Striar, Ronald R., 94 Essex St., Bangor 04401 (10)
Strickland, Marian L., Easy St., Canaan 04924 (12)
Stroud, Geoffrey A., 65 Baribeau Dr., Brunswick 04011 (3)
Strout, Warren G., 83 Essex St., Bangor 04401 (10)
Stucki, Paul, 72 Elm St., Waterville 04901 (6)
Sturtevant, Vaughn R., 33 College Ave., Waterville 04901 (6)
Sullivan, George E., R.F.D. 1, Fairfield 04937 (12)
Suyama, Eji, 58 W. Main St., Ellsworth 04605 (5)
Swanson, Ronald A., Regional Mem. Hosp., Brunswick 04011 (3)
Sweatt, Linwood A., 48 Drummond St., Auburn 04210 (1)
Swett, Alfred E., 144 State St., Portland 04101 (3)
Swett, Carlton E., 218 Water St., Skowhegan 04976 (12)
Swett, Clyde I., 18 Sherman St., Island Falls 04747 (2)
Sy, Vincente L., Milford Ave., Bingham 04920 (12)
Sylvester, Stanley B., 400 Congress St., Portland 04111 (3)
Szelenyi, Ernest, Central Maine San., Fairfield 04937 (12)
Szendey, Andrew M., 26 Gray St., Madison 04950 (12)

Tabachnick, Henry M., 110 Park Ave., Portland 04101 (3)
Takach, Robert J., 33 College Ave., Waterville 04901 (6)
Tardif, Lionel R., 111 Webster St., Lewiston 04240 (1)
Taxiarchis, Louis N., 144 State St., Portland 04101 (3)
Taylor, H. Lewis, 25 Church St., Dexter 04930 (10)
Taylor, Paul E., 9 Wentworth St., Kittery 03904 (15)
Taylor, Richard W., 34 Buttonwood Lane, Lewiston 04240 (1)
Taylor, William F., 134 U.S. Route 1, Falmouth 04105 (3)
Tchao, Jou S., 181 Russell St., Lewiston 04240 (1)
Telfeian, Alphonse, 131 Chadwick St., Portland 04102 (3)
Temple, George L., Fahey St., Belfast 04915 (13)
Tetreau, William J., 144 Spring St., Portland 04101 (3)
Thacher, Henry C., 117 Goff St., Auburn 04210 (1)
Thaidigsman, James H., 50 Union St., Ellsworth 04605 (5)
Thaxter, Langdon T., Cumberland Foreside, Portland 04110 (3)
Thegen, W. Edward, Elm St., Bucksport 04416 (5)
Thomas, Philip B., 83 Essex St., Bangor 04401 (10)
Thompson, Philip P., Jr., 131 Chadwick St., Portland 04102 (3)
Tibbetts, Otis B., 181 Gamage Ave., Auburn 04210 (1)
Titherington, John B., 97 Brook Rd., Falmouth 04105 (3)
Toner, Cornelius A., 634 Madison Ave., Albany, N. Y. 12208 (3)
Torrey, Marcus A., 75 State St., Ellsworth 04605 (5)
Torrey, Raymond L., Main St., Searsport 04974 (13)
Tounge, Harry G., Jr., 12 Union St., Camden 04843 (7)
Tousignant, Camille, 111 Pine St., Lewiston 04240 (1)
Toussaint, Leonid G., Box 9, Fort Kent 04743 (2)
Towne, Charles E., 18 Common St., Waterville 04901 (6)
Tracy, Mary J., Bristol Rd., Damariscotta 04543 (8)
Trask, Henry M., 24 Hersey St., Portland 04103 (3)
Trembly, Bruce, 33 College Ave., Waterville 04901 (6)
Troop, Donald E., 75 Main St., Springvale 04083 (15)
Trowbridge, Mason, Jr., 142 Pine St., Bangor 04401 (10)
Turcotte, Guy N., 7 Bramhall St., Portland 04102 (3)
Turcotte, Richard W., 70 Pine St., Lewiston 04240 (1)
Turgeon, Raphael F., 367 Main St., Westbrook 04092 (3)
Turnbull, Elliott D., Elm House, Naples 04055 (3)
Turner, Fennell P., Veterans Adm. Ctr., Togus 04330 (6)
Turner, Harland G., Box 38, Norridgewock 04957 (12)
Turville, Charles S., Box E, Alfred 04002 (15)
Twadelle, Frank W., 345 Water St., Gardiner 04345 (6)
Tyson, Dudley B., 91 Grove St., Bangor 04401 (10)

Uldall, Stella L., Augusta State Hosp., Augusta 04330 (6)
Urjanis, Janis, Pineland Hospital & Training Ctr., Pownal 04069 (3)

Vachon, Robert D., 34 Winter St., Sanford 04073 (15)
Van Deventer, Wilhelm H. J.,
R.F.D. 1, Mere Point Rd., Brunswick 04011 (3)
Van Lonkhuyzen, Maurice, 131 State St., Portland 04101 (3)
Veilleux, Lucien F., 30 Elm St., Waterville 04901 (6)
Vickers, Martyn A., 268 State St., Bangor 04401 (10)
Viger, Leopold A., 10 Amherst St., Biddeford 04005 (15)
Viles, Wallace E., Turner 04282 (1)
Vydas, Joseph, Bangor State Hosp., Bangor 04401 (10)

Wadsworth, Richard C., 489 State St., Bangor 04401 (10)
Wagner, Samuel L., 2 Holmes St., Winterport 04496 (10)
Wakefield, Robert D., St. Mary's Hosp., Lewiston 04240 (1)
Walsh, Andrew C., 144 State St., Portland 04101 (3)
Ward, John V., 131 State St., Portland 04101 (3)
Ward, William W., Box 646, Rockland 04841 (7)
Wasgatt, Wesley N., 41 Talbot Ave., Rockland 04841 (7)
Waterman, Richard, Waldoboro 04572 (7)
Weaver, Michael L., 1011 Patrick St., Apt. 20, Flint, Mich. 48503 (3)
Webber, Isaac M., 29 Deering St., Portland 04101 (3)
Webber, John R., 6 Northport Ave., Belfast 04915 (13)
Webber, Merlon A., 33 Lancey St., Pittsfield 04967 (12)
Webber, Peter B., 233 Vaughan St., Portland 04102 (3)
Webber, Wedgwood P., 460 Main St., Lewiston 04240 (1)
Weisz, Hans, 17 Sunrise Ter., Orono 04473 (10)
Weymouth, Currier C., Eastmont Square, Farmington 04938 (4)
White, Chester W., Jr., 22 Bramhall St., Portland 04102 (3)
White, Henry O., 22 White St., Rockland 04841 (7)
White, Houghton M., 56 Baribeau Dr., Brunswick 04011 (3)
White, Leland M., 18 Pleasant St., Caribou 04736 (2)
White, William J., 1 Mitchell Rd., South Portland 04106 (3)
Whitney, Philip G., 233 Vaughan St., Portland 04102 (3)
Whitney, Ray L., Cape Porpoise 04014 (15)
Whittier, Alice A. S., 143 Neal St., Portland 04102 (3)
Whitworth, John E., 336 Mt. Hope Ave., Bangor 04401 (10)
Wight, Donald G., 30 Mitchell Rd., South Portland 04106 (3)
Wilbur, Herbert T., Jr., 100 Main St., Southwest Harbor 04679 (5)
Wilder, William D., Augusta State Hosp., Augusta 04330 (6)
Williams, Edward P., 72 Main St., Houlton 04730 (2)
Williams, James A., 39 Pleasant St., Mechanic Falls 04256 (1)
Williams, Thomas W., 22 White St., Rockland 04841 (7)
Williamson, Elizabeth E., Blue Hill 04614 (5)
Williamson, Russell G., Blue Hill Mem. Hosp., Blue Hill 04614 (5)
Wilson, G. Ivan, 48 Court St., Houlton 04730 (2)
Wilson, Harry M., 944 Middle St., Bath 04530 (8)
Wilson, Robert D., Mt. Desert Island Hosp., Bar Harbor 04609 (5)
Wilson, Robert W., Veterans Adm., Togus 04330 (6)
Winchenbach, Francis A., 910 Washington St., Bath 04530 (8)
Winkelbauer, Rudolf G., Baribeau Dr., Brunswick 04011 (3)
Wolfahrt, Eugene P., 258 Main St., Saco 04072 (15)
Wood, George W., III, 156 North Main St., Brewer 04412 (10)
Woodcock, Allan, 35 Second St., Bangor 04401 (10)
Woodcock, John A., 35 Second St., Bangor 04401 (10)
Woodruff, Alan F., 16 Summer St., Rockland 04841 (7)
Woodman, Arthur B., 15 Johnson Rd., Falmouth Foreside 04105 (3)
Worthing, Verla E., Box A., Thomaston 04861 (7)
Wren, James C., Veterans Adm. Ctr., Togus 04330 (6)
Wyman, David S., 233 Vaughan St., Portland 04102 (3)

Yeon, Hyung J.,
Station A, Harlem Valley State Hosp., Wingdale, N. Y. 12594 (15)
York, Elihu (CDR)
MC, USN, 40 Fairfield Dr., North Kingston, R. I. 02852 (5)
Young, E. Stanley, Poland Spring 04274 (1)
Young, John, Paradise St., Bethel 04217 (9)

Zanca, Ralph, 86 Pine St., Lewiston 04240 (1)
Zbyszycki, Tadeo, 39 High St., Skowhegan 04976 (12)
Zeller, Alan W., Main St., Newcastle 04553 (8)
Zikel, Herbert M., High St., Wilton 04294 (4)
Zolov, Benjamin, 296 Congress St., Portland 04101 (3)

Past Presidents

Maine Medical Association

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*James McKeen, M.D., Topsham	1853-1854
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*Joseph H. Estabrook, M.D., Camden	1855-1856
*Hosea Rich, M.D., Bangor	1856-1857
*Gilman Daveis, M.D., Portland	1857-1858
*J. C. Bradbury, M.D., Old Town	1858-1859
*H. H. Hill, M.D., Augusta	1859-1860
*T. G. Stockbridge, M.D., Bath	1860-1861
*H. M. Harlow, M.D., Augusta	1861-1862
*Alonzo Garcelon, M.D., Lewiston	1862-1863
*J. T. Gilman, M.D., Portland	1863-1864
*N. P. Monroe, M.D., Belfast	1864-1865
*Amos Nourse, M.D., Bath	1865-1866
*S. H. Tewksbury, M.D., Portland	1866-1867
*Cyrus Briggs, M.D., Augusta	1867-1868
*I. T. Dana, M.D., Portland	1868-1869
*D. McRuer, M.D., Bangor	1869-1870
*B. F. Buxton, M.D., Warren	1870-1871
*A. J. Fuller, M.D., Bath	1871-1872
*A. P. Snow, M.D., Winthrop	1872-1873
*A. F. Page, M.D., Bucksport	1873-1874
*Thomas H. Brown, M.D., Paris	1874-1875
*J. H. Bates, M.D., Yarmouth	1875-1876
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*T. H. Jewett, M.D., South Berwick	1877-1878
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*S. C. Gordon, M.D., Portland	1879-1880
*William Warren Greene, M.D., Portland	1880-1881
*A. K. P. Meserve, M.D., Buxton	1881-1882
*George E. Brickett, M.D., Augusta	1882-1883
*Oren A. Horr, M.D., Lewiston	1883-1884
*Thomas A. Foster, M.D., Portland	1884-1885
*Sumner Laughton, M.D., Bangor	1885-1886
*J. B. Walker, M.D., Thomaston	1886-1887
*Frederick C. Thayer, M.D., Waterville	1887-1888
*Stephen H. Weeks, M.D., Portland	1888-1889
*Benjamin F. Sturgis, M.D., Auburn	1889-1890
*Samuel B. Hunter, M.D., Machias	1890-1891
*Edwin M. Fuller, M.D., Bath	1891-1892
*Alfred Mitchell, M.D., Brunswick	1892-1893
*John A. Donovan, M.D., Lewiston	1893-1894
*W. P. Giddings, M.D., Gardiner	1894-1895
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*D. A. Robinson, M.D., Bangor	1896-1897
*Wallace K. Oakes, M.D., Auburn	1897-1898
*Charles O. Hunt, M.D., Portland	1898-1899
*Bigelow T. Sanborn, M.D., Augusta	1899-1900
*Edward H. Hill, M.D., Lewiston	1900-1901
*Frederic H. Gerrish, M.D., Portland	1901-1902
*Hiram Hunt, M.D., Greenville	1902-1903
*Augustus S. Thayer, M.D., Portland	1903-1904
*F. L. Dixon, M.D., Lewiston	1904-1905
*Randall D. Bibber, M.D., Bath	1905-1906
*C. E. Williams, M.D., Auburn	1906-1907
*B. B. Foster, M.D., Portland	1907-1908
*Alfred D. Sawyer, M.D., Fort Fairfield	1908-1909
*Galen M. Woodcock, M.D., Bangor	1909-1910
*E. H. Bennett, M.D., Lubec	1910-1911
*Stanley P. Warren, M.D., Portland	1911-1912
*Ralph H. Marsh, M.D., Guilford	1912-1913
*W. C. Peters, M.D., Bangor	1913-1914
*H. L. Bartlett, M.D., Norway	1914-1915
*Erastus E. Holt, M.D., Portland	1915-1916
*W. F. Hart, M.D., Camden	1916-1917
*James A. Spalding, M.D., Portland	1917-1918
*George H. Coombs, M.D., Waldoboro	1918-1919
*H. B. Mason, M.D., Calais	1919-1920
*Theodore E. Hardy, M.D., Waterville	1920-1921
*Addison S. Thayer, M.D., Portland	1921-1922
*L. T. Snipe, M.D., Bath	1922-1923
*C. A. Moulton, M.D., Hartland	1923-1924
*F. W. Mann, M.D., Houlton	1924-1925
*J. D. Phillips, M.D., Southwest Harbor	1925-1926
*L. P. Gerrish, M.D., Lisbon Falls	1926-1927
*Herbert F. Twitchell, M.D., Portland	1927-1928
*Frank Y. Gilbert, M.D., Portland	1928-1929
*Delbert M. Stewart, M.D., South Paris	1929-1930
*Charles B. Sylvester, M.D., Portland	1930-1931
*Ernest V. Call, M.D., Lewiston	1931-1932
*E. Delmont Merrill, M.D., Dover-Foxcroft	1932-1933
Warren E. Kershner, M.D., Bath	1933-1934
*Edwin W. Gehring, M.D., Portland	1934-1935
*John L. Johnson, M.D., Bangor	1935-1936
*Frederick T. Hill, M.D., Waterville	1936-1937
*Ralph W. Wakefield, M.D., Bar Harbor	1937-1938
Willard H. Bunker, M.D., York Harbor	1938-1939
*George L. Pratt, M.D., Fairfield	1939-1940
*Thomas A. Foster, M.D., Portland	1940-1941
*P. L. B. Ebbett, M.D., Houlton	1941-1942
Carl H. Stevens, M.D., Belfast	1942-1943
*Oscar F. Larson, M.D., Machias	1943-1944
*R. V. N. Bliss, M.D., Blue Hill	1944-1945
*Adam P. Leighton, M.D., Portland	1945-1946
*John O. Piper, M.D., Waterville	1946-1947
*Stephen A. Cobb, M.D., Sanford	1947-1948
Forrest B. Ames, M.D., Bangor	1948-1949
Ralph A. Goodwin, Sr., M.D., Auburn	1949-1950
Foster C. Small, M.D., Belfast	1950-1951
C. Harold Jameson, M.D., Rockland	1951-1952
*Eugene H. Drake, M.D., Portland	1952-1953
Norman H. Nickerson, M.D., Greenville	1953-1954
*Robert W. Belknap, M.D., Damariscotta	June-August 1954 (Died in Office)
*William F. Mahaney, M.D., Saco	1954-1955
Martyn A. Vickers, M.D., Bangor	1955-1956
*Armand Albert, M.D., Van Buren	1956-1957
Francis A. Winchenbach, M.D., Bath	1957-1958
Eugene E. O'Donnell, M.D., Portland	1958-1959
Allan Woodcock, M.D., Bangor	1959-1960
*Wilson H. McWethy, M.D., Augusta	June 1960-February 1961 (Died in Office)
Carl E. Richards, M.D., Sanford	February 1961-June 1961
James A. MacDougall, M.D., Rumford	1961-1962
*Ralph C. Stuart, M.D., Guilford	1962-1963
Ernest W. Stein, M.D., Pittsfield	1963-1964
Thomas A. Martin, M.D., Portland	1964-1965
John F. Dougherty, M.D., Bath	1965-1966
George E. Sullivan, M.D., Fairfield	1966-1967
Paul S. Hill, Jr., M.D., Saco	1967-1968

* Deceased